APPENDIX 8.1B

Modeling Support Data

APPENDIX 8.1B

Modeling Support Data

Tables presented in this Appendix are as follows:

In addition, this appendix contains data on the annual and quarterly wind roses for the Riverside met data site, climatic summaries for Sun City and San Jacinto, and Figures 8.1B-1 and 8.1B-2 (SLAMS and NAMS station locations).

Modeling input/output files are included in the enclosed CDs.

TABLE 8.1B-1
Turbine Screening Analysis Summary

GE LMS100 PA Gas Turbines Parameters for Screening Modeling

Scenario	GE Case No.	Ambient Temp (°F)	Case Description	Stack Height (m)	Exhaust Temp (Kelvin)	Exhaust Vel (m/s)	Stack Diam (m)	NO_x (g/s/tur)	SO_2 (g/s/tur)	CO (g/s/tur)	PM_{10} (g/s/tur)
1	112	110	110 deg F Full Load w/ EVAP	27.43	697.7	30.8	4.15	0.945	0.078	1.399	0.75600
2	113	110	110 deg F 75%l Load w/ EVAP	27.43	686.1	25.9	4.15	0.743	0.078	1.096	0.630
3	114	110	110 deg F 50%l Load w/ EVAP	27.43	695.7	20.8	4.15	0.554	0.078	0.806	0.504
4	106	84	84 deg F Full Load w/ EVAP	27.43	697.9	30.8	4.15	0.945	0.078	1.386	0.756
5	107	84	84 deg F 75%l Load w/ EVAP	27.43	686.3	25.9	4.15	0.743	0.078	1.084	0.630
6	108	84	84 deg F 50%l Load w/ EVAP	27.43	696.2	20.8	4.15	0.542	0.078	0.806	0.504
7	103	59	59 deg F Full Load w/ EVAP	27.43	689.6	32.1	4.15	1.008	0.078	1.462	0.756
8	104	59	59 deg F 75%l Load w/ EVAP	27.43	677.7	26.9	4.15	0.781	0.078	1.159	0.630
9	105	59	59 deg F 50%l Load w/ EVAP	27.43	687.4	21.5	4.15	0.580	0.078	0.844	0.504
10	100	30	30 deg F Full Load no EVAP	27.43	678.5	32.4	4.15	1.021	0.078	1.498	0.756
11	101	30	30 deg F 75%l Load no EVAP	27.43	670.9	27.2	4.15	0.794	0.078	1.164	0.630
12	102	30	30 deg F 50%l Load no EVAP	27.43	680.5	21.8	4.15	0.580	0.078	0.852	0.504

Normalized ISCST3 Results for Screening Modeling (i.e., ug/m3 at 0.2 g/s/tur, total 1 g/s all turbines)

Scenario	GE Case No.	Ambient Temp (°F)	Case Description	1-Hour	3-Hour	8-Hour	24-Hour	Annual
1	112	110	110 deg F Full Load w/ EVAP	7.29724	7.27604	5.12571	2.71911	na
2	113	110	110 deg F 75%l Load w/ EVAP	8.02690	8.01750	5.74159	3.00183	na
3	114	110	110 deg F 50%l Load w/ EVAP	8.41829	8.41379	6.19282	3.15318	na
4	106	84	84 deg F Full Load w/ EVAP	7.29643	7.27521	5.12504	2.71879	na
5	107	84	84 deg F 75%l Load w/ EVAP	8.02643	8.01711	5.74099	3.00160	na
6	108	84	84 deg F 50%l Load w/ EVAP	8.41787	8.41336	6.19167	3.15301	na
7	103	59	59 deg F Full Load w/ EVAP	7.14541	7.12451	5.00739	2.66246	na
8	104	59	59 deg F 75%l Load w/ EVAP	7.93361	7.91770	5.65117	2.96213	na
9	105	59	59 deg F 50%l Load w/ EVAP	8.39424	8.38991	6.14456	3.14432	na
10	100	30	30 deg F Full Load no EVAP	7.15300	7.13333	5.01546	2.66636	na
11	101	30	30 deg F 75%l Load no EVAP	7.91633	7.90295	5.63936	2.95687	na
12	102	30	30 deg F 50%l Load no EVAP	8.38747	8.38330	6.13155	3.14171	na

ISCST3 Screening Results for Criteria Pollutants (ug/m^3) for Five GE LMS100 PA Turbines

Scenario		Ambient Temp (°F)	Case Description	1-Hour NO_x	Annual NO_x	1-Hour SO_2	3-Hour SO_2	24-Hour SO_2	Annual SO_2	1-Hour CO	8-Hour CO	24-Hour PM10	Annual PM10
1	112	110	110 deg F Full Load w/ EVAP	34.4796	na	2.8496	2.8413	1.0618	na	51.0296	35.8441	10.2782	na
2	113	110	110 deg F 75%l Load w/ EVAP	29.6356	na	3.1345	3.1308	1.1722	na	43.9949	31.4697	9.4558	na
3	114	110	110 deg F 50%l Load w/ EVAP	23.3355	na	3.2873	3.2855	1.2313	na	33.9425	24.9695	7.9460	na
4	106	84	84 deg F Full Load w/ EVAP	34.4756	na	2.8493	2.8410	1.0617	na	50.5643	35.5165	10.2770	na
5	107	84	84 deg F 75%l Load w/ EVAP	29.6342	na	3.1343	3.1307	1.1721	na	43.4872	31.1047	9.4550	na
6	108	84	84 deg F 50%l Load w/ EVAP	22.8040	na	3.2872	3.2854	1.2313	na	33.9409	24.9656	7.9456	na
7	103	59	59 deg F Full Load w/ EVAP	36.0129	na	2.7903	2.7821	1.0397	na	52.2187	36.5940	10.0641	na
8	104	59	59 deg F 75%l Load w/ EVAP	30.9887	na	3.0981	3.0919	1.1567	na	45.9632	32.7542	9.3307	na
9	105	59	59 deg F 50%l Load w/ EVAP	24.3265	na	3.2780	3.2763	1.2279	na	35.4321	25.9362	7.9237	na
10	100	30	30 deg F Full Load no EVAP	36.5018	na	2.7932	2.7856	1.0412	na	53.2183	37.3150	10.0788	na
11	101	30	30 deg F 75%l Load no EVAP	31.4279	na	3.0921	3.0861	1.1547	na	46.0647	32.8211	9.3141	na
12	102	30	30 deg F 50%l Load no EVAP	24.3069	na	3.2753	3.2737	1.2268	na	35.7306	26.1204	7.9171	na
			Max Conc	36.5018		3.2873	3.2856	1.2313		53.2183	37.3150	10.2782	

TABLE 8.1B-2

Emission Rates and Stack Parameters for Modeling

	Stack Height, M	Stack Diam, m	Temp, deg K	Exhaust Velocity, m/s	Emission Rates, g/s				Emission Rates, lb/hr			
					NOx	SO_2	CO	PM_{10}	NOx	SO_2	CO	PM_{10}
Averaging Period: One hour												
Turbine 1	27.43	4.1500	678.5	32.4	1.021	0.078	1.487	n/a	8.1	0.62	11.8	n/a
Turbine 2	27.43	4.1500	678.5	32.4	1.021	0.078	1.487	n/a	8.1	0.62	11.8	n/a
Turbine 3	27.43	4.1500	678.5	32.4	1.021	0.078	1.487	n/a	8.1	0.62	11.8	n/a
Turbine 4	27.43	4.1500	678.5	32.4	1.021	0.078	1.487	n/a	8.1	0.62	11.8	n/a
Turbine 5	27.43	4.1500	678.5	32.4	1.021	0.078	1.487	n/a	8.1	0.62	11.8	n/a
Em Generator	12.192	0.2030	698.2	200.0	4.036	0.004	0.583	n/a	32.03	0.03	4.63	n/a
Fire Pump	12.192	0.1270	665.4	76.7	(1)	(1)	(1)	n/a	(1)	(1)	(1)	n/a
Cooling Tower (each cell)	11.92	6.7100	302.6	11.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Averaging Period: Three hours												
Turbine 1	27.43	4.1500	695.7	20.8	n/a	0.078	n/a	n/a	n/a	0.62	n/a	n/a
Turbine 2	27.43	4.1500	695.7	20.8	n/a	0.078	n/a	n/a	n/a	0.62	n/a	n/a
Turbine 3	27.43	4.1500	695.7	20.8	n/a	0.078	n/a	n/a	n/a	0.62	n/a	n/a
Turbine 4	27.43	4.1500	695.7	20.8	n/a	0.078	n/a	n/a	n/a	0.62	n/a	n/a
Turbine 5	27.43	4.1500	695.7	20.8	n/a	0.078	n/a	n/a	n/a	0.62	n/a	n/a
Em Generator	12.192	0.2030	698.2	200.0	n/a	0.00126	n/a	n/a	n/a	0.0100	n/a	n/a
Fire Pump	12.192	0.1270	665.4	76.7	n/a	(1)	n/a	n/a	n/a	(1)	n/a	n/a
Cooling Tower (each cell)	11.92	6.7100	302.6	11.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Averaging Period: Eight hours												
Turbine 1	27.43	4.1500	678.5	32.4	n/a	n/a	2.423	n/a	n/a	n/a	19.23	n/a
Turbine 2	27.43	4.1500	678.5	32.4	n/a	n/a	2.423	n/a	n/a	n/a	19.23	n/a
Turbine 3	27.43	4.1500	678.5	32.4	n/a	n/a	2.423	n/a	n/a	n/a	19.23	n/a
Turbine 4	27.43	4.1500	678.5	32.4	n/a	n/a	2.423	n/a	n/a	n/a	19.23	n/a
Turbine 5	27.43	4.1500	678.5	32.4	n/a	n/a	2.423	n/a	n/a	n/a	19.23	n/a
Em Generator	12.192	0.2030	698.2	200.0	n/a	n/a	7.292E-02	n/a	n/a	n/a	0.58	n/a
Fire Pump	12.192	0.1270	665.4	76.7	n/a	n/a	(1)	n/a	n/a	n/a	(1)	n/a
Cooling Tower (each cell)	11.92	6.7100	302.6	11.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Averaging Period: 24 hours												
Turbine 1	27.43	4.1500	697.7	30.8	n/a	0.078	n/a	0.756	n/a	0.62	n/a	6
Turbine 2	27.43	4.1500	697.7	30.8	n/a	0.078	n/a	0.756	n/a	0.62	n/a	6
Turbine 3	27.43	4.1500	697.7	30.8	n/a	0.078	n/a	0.756	n/a	0.62	n/a	6
Turbine 4	27.43	4.1500	697.7	30.8	n/a	0.078	n/a	0.756	n/a	0.62	n/a	6
Turbine 5	27.43	4.1500	697.7	30.8	n/a	0.078	n/a	0.756	n/a	0.62	n/a	6
Em Generator	12.192	0.2030	698.2	200.0	n/a	1.575E-04	n/a	2.636E-03	n/a	1.250E-03	n/a	2.092E-02
Fire Pump	12.192	0.1270	665.4	76.7	n/a	(1)	n/a	(1)	n/a	(1)	n/a	(1)
Cooling Tower (each cell)	11.92	6.7100	302.6	11.5	n/a	n/a	n/a	1.119E-02	n/a	n/a	n/a	0.0888
Averaging Period: Annual												
Turbine 1	27.43	4.1500	689.6	32.1	0.604	0.043	n/a	0.417	4.7945	0.3425	n/a	3.3105
Turbine 2	27.43	4.1500	689.6	32.1	0.604	0.043	n/a	0.417	4.7945	0.3425	n/a	3.3105
Turbine 3	27.43	4.1500	689.6	32.1	0.604	0.043	n/a	0.417	4.7945	0.3425	n/a	3.3105
Turbine 4	27.43	4.1500	689.6	32.1	0.604	0.043	n/a	0.417	4.7945	0.3425	n/a	3.3105
Turbine 5	27.43	4.1500	689.6	32.1	0.604	0.043	n/a	0.417	4.7945	0.3425	n/a	3.3105
Em Generator	12.192	0.2030	698.2	200.0	2.395E-02	2.520E-05	n/a	3.780E-04	1.90E-01	2.00E-04	n/a	3.00E-03
Fire Pump	12.192	0.1270	665.4	76.7	2.570E-03	2.991E-06	n/a	5.040E-05	2.04E-02	2.37E-05	n/a	4.00E-04
Cooling Tower (each cell)	11.92	6.7100	302.6	11.5	n/a	n/a	n/a	6.174E-03	n/a	n/a	n/a	0.049

Note: 1. Emergency generator and fire pump will not operate during the same 24-hour period.
Higher concentration from screening assessement used for each pollutant and averaging period.

Edison Mission Energy
Table of Building Heights

Table 8.1B-3

Item No.	Structure/Building Name and Description	Structure Plan Dimensions, feet	Structure Height, feet
1	Administration & Control Building with insulated standing seam metal roof with slope 1/2" per foot.	80' x 40'	21' eave
2	Maintenance/Warehouse Building with insulated standing seam metal roof with slope 1/2" per foot.	100' x 40'	21' eave
3	Compressor Building with insulated standing seam metal roof with slope 1/2" per foot.	90' x 60'	21' eave
4	Water Treatment Building with insulated standing seam metal roof with slope 1/2" per foot. (HOLD - THIS BUILDING MAY BE DELETED AND REPLACED WITH PAD AND SHED COVER.)	80' x 40'	21' eave
5	Cooling Tower Chemical Building with standing seam metal roof with slope 1/2" per foot.	35' x 22'	18' eave
6	Combustion Turbine (CT) - Inlet Air Filter. Highest part of CT	30' wide x 22' deep	48'
7	Exhaust Duct (up to Stack)	23' wide x 25' long on top, then tapers down toward the CTG exhaust.	38'
8	Exhaust Stack	13' - 6" ID	90'
9	Combustion Turbine VBV Silencer Stack	10' - 9" OD	68'
10	Cooling Tower	37' wide x 211' long	39' to top of stack, 27' fan deck
11	Demineralized Water Storage Tank, 100,000 gallon capacity	28' diameter	24' straight side height with a domed roof
12	Recycled Water Storage Tank, 150,000 gallon capacity. NOTE: WALNUT SITE, ONLY, WILL HAVE 2 OF THESE TANKS.	31' diameter	28' straight side height with a cone roof
13	Treated Water Storage Tank, 100,000 gallon capacity	28' diameter	24' straight side height with a domed roof

Stack Information

Table 8.1B-4 (7 Pages)

Stack Type	Base Elevation (ft)	Base Elevation (m)	UTM-X (m)	UTM-Y (m)	Height (ft)	Height (m)	Diameter (ft)	Diameter (m)	Flowrate (acfm)	Stack Velocity (ft/sec)	Stack Velocity (m/s)	Stack Temperature (F)	Stack Temperature (K)
Turbine Stacks													
Turb1	1460	445.0	485812.71	3732662.88	90	27.43	13.5	4.15	variable	-	-	variable	-
Turb2	1460	445.0	485756.01	3732662.88	90	27.43	13.5	4.15	variable	-	-	variable	-
Turb3	1460	445.0	485700.08	3732662.88	90	27.43	13.5	4.15	variable	-	-	variable	-
Turb4	1460	445.0	485643.76	3732662.88	90	27.43	13.5	4.15	variable	-	-	variable	-
Turb5	1460	445.0	485587.44	3732662.88	90	27.43	13.5	4.15	variable	-	-	variable	-
Cooling Tower Cells													
CT_Cell1	1460	445.0	485514.04	3732633.43	39	11.89	22	6.71	-	65.6	20.0	85	302.6
CT_Cell2	1460	445.0	485514.04	3732646.27	39	11.89	22	6.71	-	65.6	20.0	85	302.6
CT_Cell3	1460	445.0	485514.04	3732659.12	39	11.89	22	6.71	-	65.6	20.0	85	302.6
CT_Cell4	1460	445.0	485514.04	3732671.96	39	11.89	22	6.71	-	65.6	20.0	85	302.6
CT_Cell5	1460	445.0	485514.04	3732684.81	39	11.89	22	6.71	-	65.6	20.0	85	302.6
Diesel Fire Pump Engine(300 hp)	1460	445.0	485595.73	3732710.29	40	12.19	0.4167	0.1270	2,058	251.6	76.7	738	665.4
Diesel Generator (1750 kW)	1460	445.0	485578.28	3732710.29	40	12.19	0.6667	0.2032	13,843	661.0	201.5	797	698.2

Sun Valley Energy Park
Buildings & Structures

Building/Structure	Drawing Ref. No.	UTM-X (m)	UTM-Y (m)	Height (ft)	Height (m)
Water Treatment/Chemical Bldg	32	485655.98	3732722.23	21	6.40
		485631.59	3732722.23		
		485631.59	3732710.03		
		485655.98	3732710.03		
		485655.98	3732722.23		
Maintenance/Wharehouse Combined	31 & 46	485730.80	3732713.24	21	6.40
		485700.32	3732713.24		
		485700.32	3732725.43		
		485730.80	3732725.43		
		485730.80	3732713.24		
Admin/Control Bldg	47	485691.59	3732725.07	21	6.40
		485667.21	3732725.07		
		485667.21	3732712.88		
		485691.59	3732712.88		
		485691.59	3732725.07		
Gas Compressor/Electrical Bldg	37	485569.96	3732728.99	21	6.40
		485542.53	3732728.99		
		485542.53	3732710.70		
		485569.96	3732710.70		
		485569.96	3732728.99		
Cooling Tower Chemical Bldg	38	485531.86	3732652.53	18	5.49
		485531.86	3732658.63		
		485527.28	3732658.63		
		485527.28	3732652.53		
		485531.86	3732652.53		
Cooling Tower - Overall Structure	29	485520.45	3732627.01	27	8.23
		485507.64	3732627.01		
		485507.64	3732691.23		
		485520.45	3732691.23		
		485520.45	3732627.01		
Air Intake for Turbine #1		485796.15	3732688.85	48	14.63
		485796.15	3732684.55		
		485786.98	3732684.55		
		485786.98	3732688.85		
		485796.15	3732688.85		

SCR for Turbine #1		485810.23	3732659.38	38	11.58
		485802.58	3732659.41		
		485794.32	3732660.52		
		485794.32	3732663.39		
		485802.58	3732666.39		
		485810.23	3732666.39		
		485812.57	3732665.09		
		485812.57	3732660.68		
		485810.23	3732659.38		
Air Intake for Turbine #2		485739.44	3732684.55	48	14.63
		485730.28	3732684.55		
		485730.28	3732688.85		
		485739.44	3732688.85		
		485739.44	3732684.55		
SCR for Turbine #2		485753.50	3732659.32	38	11.58
		485745.88	3732659.32		
		485737.62	3732660.52		
		485737.62	3732663.41		
		485745.88	3732666.39		
		485753.50	3732666.39		
		485755.92	3732665.06		
		485755.92	3732660.68		
		485753.50	3732659.32		
Air Intake for Turbine #3		485683.51	3732684.55	48	14.63
		485674.35	3732684.55		
		485674.35	3732688.85		
		485683.51	3732688.85		
		485683.51	3732684.55		
SCR for Turbine #3		485697.58	3732659.38	38	11.58
		485689.95	3732659.38		
		485681.66	3732660.52		
		485681.66	3732663.44		
		485689.95	3732666.39		
		485697.58	3732666.39		
		485699.91	3732665.09		
		485699.91	3732660.71		
		485697.58	3732659.38		
Air Intake for Turbine #4		485627.19	3732684.55	48	14.63
		485618.03	3732684.55		
		485618.03	3732688.85		
		485627.19	3732688.85		
		485627.19	3732684.55		
SCR for Turbine #4				38	11.58
		485641.28	3732659.38		
		485633.63	3732659.38		

		485625.34	3732660.55		
		485625.34	3732663.49		
		485633.66	3732666.39		
		485641.28	3732666.39		
		485643.70	3732665.09		
		485643.70	3732660.71		
		485641.28	3732659.38		
Air Intake for Turbine #5		485570.87	3732684.55	48	14.63
		485561.71	3732684.55		
		485561.71	3732688.85		
		485570.87	3732688.85		
		485570.87	3732684.55		
SCR for Turbine #5		485584.93	3732659.35	38	11.58
		485577.30	3732659.35		
		485569.04	3732660.55		
		485569.04	3732663.47		
		485577.30	3732666.39		
		485584.93	3732666.39		
		485587.32	3732665.06		
		485587.32	3732660.68		
		485584.93	3732659.35		

Sun Valley Energy Park
Storage Tank Information

Tank Type	Drawing Ref. No.	Tank Center UTM-X (m)	Tank Center UTM-Y (m)	Coordinates UTM-X (m)	Coordinates UTM-Y (m)	Height (ft)	Height (m)	Diameter (ft)	Diameter (m)
Treated Water Tank	34	485637.02	3732730.67	485637.02	3732734.94	24	7.32	28	8.53
				485636.19	3732734.85				
				485635.39	3732734.61				
				485634.65	3732734.22				
				485634.00	3732733.69				
				485633.47	3732733.04				
				485633.08	3732732.30				
				485632.84	3732731.50				
				485632.76	3732730.67				
				485632.84	3732729.84				
				485633.08	3732729.04				
				485633.47	3732728.30				
				485634.00	3732727.65				
				485634.65	3732727.12				
				485635.39	3732726.73				
				485636.19	3732726.49				
				485637.02	3732726.41				
				485637.85	3732726.49				
				485638.65	3732726.73				
				485639.39	3732727.12				
				485640.04	3732727.65				
				485640.57	3732728.30				
				485640.96	3732729.04				
				485641.20	3732729.84				
				485641.29	3732730.67				
				485641.20	3732731.50				
				485640.96	3732732.30				
				485640.57	3732733.04				
				485640.04	3732733.69				
				485639.39	3732734.22				
				485638.65	3732734.61				
				485637.85	3732734.85				
Recycled Water Tank	30	485620.21	3732713.20	485620.21	3732719.30	28	8.53	40	12.19
				485619.02	3732719.18				
				485617.88	3732718.83				
				485616.82	3732718.27				
				485615.90	3732717.51				
				485615.14	3732716.59				
				485614.58	3732715.53				
				485614.23	3732714.39				
				485614.12	3732713.20				
				485614.23	3732712.01				
				485614.58	3732710.87				
				485615.14	3732709.81				
				485615.90	3732708.89				
				485616.82	3732708.13				
				485617.88	3732707.57				
				485619.02	3732707.22				
				485620.21	3732707.11				
				485621.40	3732707.22				
				485622.54	3732707.57				
				485623.60	3732708.13				
				485624.52	3732708.89				
				485625.28	3732709.81				
				485625.84	3732710.87				

				485626.19	3732712.01				
				485626.31	3732713.20				
				485626.19	3732714.39				
				485625.84	3732715.53				
				485625.28	3732716.59				
				485624.52	3732717.51				
				485623.60	3732718.27				
				485622.54	3732718.83				
				485621.40	3732719.18				
Demineralized Water Tank	36	485650.18	3732730.67	485650.18	3732734.94	24	7.32	28	8.53
				485649.35	3732734.85				
				485648.55	3732734.61				
				485647.81	3732734.22				
				485647.16	3732733.69				
				485646.63	3732733.04				
				485646.24	3732732.30				
				485646.00	3732731.50				
				485645.92	3732730.67				
				485646.00	3732729.84				
				485646.24	3732729.04				
				485646.63	3732728.30				
				485647.16	3732727.65				
				485647.81	3732727.12				
				485648.55	3732726.73				
				485649.35	3732726.49				
				485650.18	3732726.41				
				485651.01	3732726.49				
				485651.81	3732726.73				
				485652.55	3732727.12				
				485653.20	3732727.65				
				485653.73	3732728.30				
				485654.12	3732729.04				
				485654.36	3732729.84				
				485654.45	3732730.67				
				485654.36	3732731.50				
				485654.12	3732732.30				
				485653.73	3732733.04				
				485653.20	3732733.69				
				485652.55	3732734.22				
				485651.81	3732734.61				
				485651.01	3732734.85				
Recycled Chlorination Tank	26	485620.07	3732729.53	485620.07	3732734.71	24	7.32	34	10.36
				485619.06	3732734.61				
				485618.09	3732734.32				
				485617.19	3732733.84				
				485616.41	3732733.19				
				485615.76	3732732.41				
				485615.28	3732731.51				
				485614.99	3732730.54				
				485614.89	3732729.53				
				485614.99	3732728.52				
				485615.28	3732727.55				
				485615.76	3732726.65				
				485616.41	3732725.87				
				485617.19	3732725.22				
				485618.09	3732724.74				
				485619.06	3732724.45				
				485620.07	3732724.35				
				485621.08	3732724.45				
				485622.05	3732724.74				
				485622.95	3732725.22				
				485623.73	3732725.87				

				485624.38	3732726.65				
				485624.86	3732727.55				
				485625.15	3732728.52				
				485625.25	3732729.53				
				485625.15	3732730.54				
				485624.86	3732731.51				
				485624.38	3732732.41				
				485623.73	3732733.19				
				485622.95	3732733.84				
				485622.05	3732734.32				
				485621.08	3732734.61				
Fire Water Tank	35	485593.40	3732724.64	485593.40	3732731.65	24	7.32	46	14.02
				485592.03	3732731.52				
				485590.72	3732731.12				
				485589.51	3732730.47				
				485588.44	3732729.60				
				485587.57	3732728.54				
				485586.92	3732727.32				
				485586.53	3732726.01				
				485586.39	3732724.64				
				485586.53	3732723.27				
				485586.92	3732721.96				
				485587.57	3732720.75				
				485588.44	3732719.68				
				485589.51	3732718.81				
				485590.72	3732718.16				
				485592.03	3732717.77				
				485593.40	3732717.63				
				485594.77	3732717.77				
				485596.08	3732718.16				
				485597.30	3732718.81				
				485598.36	3732719.68				
				485599.23	3732720.75				
				485599.88	3732721.96				
				485600.28	3732723.27				
				485600.41	3732724.64				
				485600.28	3732726.01				
				485599.88	3732727.32				
				485599.23	3732728.54				
				485598.36	3732729.60				
				485597.30	3732730.47				
				485596.08	3732731.12				
				485594.77	3732731.52				

Table 8.1B-5

South Coast Air Basin

County: Riverside

OZONE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hour Indicator	0.333	0.332	0.308	0.297	0.276	0.269	0.263	0.261	0.251	0.240	0.222	0.207	0.192	0.188	0.188	0.176	0.171	0.154	0.154	0.158
Peak 8-Hour Indicator	0.228	0.228	0.207	0.209	0.205	0.205	0.198	0.196	0.194	0.189	0.170	0.162	0.151	0.146	0.150	0.143	0.141	0.130	0.125	0.131
4th High 1-Hr. in 3 Yrs	0.330	0.330	0.320	0.290	0.270	0.270	0.270	0.270	0.250	0.240	0.240	0.220	0.200	0.187	0.187	0.170	0.166	0.149	0.149	0.157
Avg. of 4th High 8-Hr. in 3 Yrs	0.201	0.209	0.197	0.191	0.180	0.180	0.177	0.175	0.169	0.165	0.157	0.149	0.140	0.135	0.129	0.124	0.114	0.111	0.113	0.118
Maximum 1-Hr. Concentration	0.320	0.350	0.270	0.290	0.280	0.270	0.290	0.240	0.260	0.260	0.253	0.213	0.203	0.187	0.195	0.144	0.164	0.152	0.160	0.169
Max. 8-Hr. Concentration	0.202	0.23	0.217	0.186	0.241	0.213	0.181	0.196	0.193	0.195	0.208	0.161	0.162	0.148	0.169	0.123	0.126	0.135	0.130	0.146
Days Above State Standard	182	177	174	175	191	182	150	155	159	157	144	134	107	128	80	83	93	97	93	102
Days Above Nat. 1-Hr. Std.	132	132	118	125	133	119	97	99	99	86	90	69	50	40	40	9	23	28	22	37
Days Above Nat. 8-Hr. Std.	156	159	146	151	152	148	122	132	135	124	127	99	84	106	65	56	70	73	67	85

PM_{10} (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)					252	252	250	179	126	231	161	219	162	163	116	153	139	219	130	164
Max. 24-Hr. Concentration (Nat)					252	252	250	179	126	231	161	219	162	163	116	153	139	219	130	164
Annual Average (State)						94.0	78.2	76.0	62.0	72.5	65.5	68.8	61.5	65.3		72.2	60.1	62.9	58.4	56.9
Annual Average (Nat)					94.5	93.0	78.2	76.1	62.6	72.5	65.5	68.8	62.8	65.6	46.2	72.2	59.1	63.3	58.1	55.6
Calc Days Above State 24-Hr Std						305	275	250	233	251	244	226	251	257		261	248	240	251	211
Calc Days Above Nat 24-Hr Std					30	34	18	12	0	18	6	25	6	6	0	0	0	6	0	6

$PM_{2.5}$ (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)																111.2	119.6	98.0	77.6	104.3
Max. 24-Hr. Concentration (Nat)																111.2	119.6	98.0	77.6	104.3
98th Percentile of 24-Hr Conc.																75.4	77.1	74.3	66.3	76.6
Annual Average (State)																				24.8
Avg. of Qtrly. Means (Nat)																31.0	28.3	30.9	27.4	24.8

CARBON MONOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 8-Hr. Indicator	8.3	7.9	8.4	8.7	8.7	8.5	8.1	8.0	6.9	6.6	6.3	6.2	6.2	5.9	5.3	4.7	4.7	4.4	4.7	3.9
Max. 1-Hr. Concentration	16.0	14.0	18.0	13.0	17.0	14.0	15.0	14.0	11.0	10.0	11.0	9.0	9.1	10.7	6.4	7.4	8.8	5.8	6.5	4.6
Max. 8-Hr. Concentration	8.9	9.1	8.3	7.6	10.0	10.3	7.3	7.4	6.1	7.1	7.3	6.3	5.3	5.6	4.8	4.4	4.2	4.5	3.8	3.7
Days Above State 8-Hr. Std.	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Days Above Nat. 8-Hr. Std.	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NITROGEN DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.161	0.162	0.160	0.163	0.170	0.176	0.174	0.172	0.168	0.159	0.138	0.134	0.133	0.127	0.167	0.185	0.213	0.216	0.200	0.161
Max. 1-Hr. Concentration	0.170	0.160	0.160	0.210	0.190	0.160	0.160	0.210	0.230	0.140	0.181	0.147	0.110	0.200	0.255	0.307	0.214	0.237	0.149	0.099
Max. Annual Average	0.035	0.035	0.032	0.027		0.036	0.034	0.035	0.030		0.031	0.030	0.029	0.026	0.017	0.025	0.022	0.024	0.017	0.021

SULFUR DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.02
Max. Annual Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max. 24-Hr. Concentration	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.04	0.01	0.00	0.01

Table A-97

Portions of Riverside County lie within the Mojave Desert and Salton Sea Air Basins.

Table 8.1B-6

South Coast Air Basin

County: San Bernardino

OZONE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hour Indicator	0.328	0.330	0.321	0.304	0.284	0.277	0.273	0.265	0.266	0.252	0.252	0.232	0.233	0.222	0.224	0.211	0.213	0.172	0.172	0.178
Peak 8-Hour Indicator	0.232	0.232	0.238	0.227	0.211	0.204	0.202	0.198	0.200	0.200	0.187	0.186	0.175	0.168	0.182	0.179	0.178	0.144	0.144	0.144
4th High 1-Hr. in 3 Yrs	0.320	0.320	0.320	0.320	0.290	0.280	0.280	0.270	0.270	0.250	0.250	0.234	0.231	0.215	0.217	0.211	0.211	0.170	0.169	0.167
Avg. of 4th High 8-Hr. in 3 Yrs	0.210	0.211	0.211	0.200	0.195	0.188	0.185	0.182	0.180	0.177	0.171	0.165	0.161	0.148	0.154	0.147	0.146	0.129	0.128	0.131
Maximum 1-Hr. Concentration	0.340	0.340	0.310	0.290	0.350	0.320	0.330	0.290	0.280	0.270	0.265	0.256	0.239	0.205	0.244	0.174	0.184	0.184	0.161	0.176
Max. 8-Hr. Concentration	0.248	0.252	0.240	0.198	0.250	0.252	0.193	0.203	0.211	0.185	0.192	0.203	0.173	0.143	0.206	0.142	0.149	0.144	0.139	0.153
Days Above State Standard	197	184	179	179	193	192	161	160	176	170	158	135	132	122	100	98	101	99	94	106
Days Above Nat. 1-Hr. Std.	162	138	145	141	153	143	115	109	123	112	115	91	79	53	58	37	25	32	30	50
Days Above Nat. 8-Hr. Std.	178	166	167	163	174	169	145	143	164	157	142	110	110	93	88	87	75	79	85	86

PM_{10} (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)					287	271	475	163	649	143	147	178	136	208	114	183	124	166	102	149
Max. 24-Hr. Concentration (Nat)					289	271	475	163	649	143	147	178	136	208	114	183	124	166	102	149
Annual Average (State)						79.7	77.3	68.5	79.0	58.2	60.0	60.8	54.9	53.6	50.2	60.1	52.6	52.4	50.1	44.8
Annual Average (Nat)					81.3	79.7	77.3	68.5	79.0	58.3	59.9	60.8	54.9	53.6	50.2	65.8	52.6	52.2	50.1	44.9
Calc Days Above State 24-Hr Std						293	265	250	243	231	232	209	211	174	171	223	195	208	201	139
Calc Days Above Nat 24-Hr Std					19	18	19	6	12	0	0	21	0	6	0	6	0	6	0	0

$PM_{2.5}$ (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)																121.4	89.8	78.5	82.1	98.1
Max. 24-Hr. Concentration (Nat)																121.4	89.8	78.5	82.1	98.1
98th Percentile of 24-Hr Conc.																85.6	70.3	69.5	66.3	66.9
Annual Average (State)																		25.0	25.8	23.8
Avg. of Qtrly. Means (Nat)																25.7	25.9	26.5	25.8	23.8

CARBON MONOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 8-Hr. Indicator	6.2	5.8	7.2	7.1	7.5	7.8	7.7	7.4	6.7	6.0	5.5	6.4	6.3	6.1	5.1	4.9	4.9	4.1	3.5	3.6
Max. 1-Hr. Concentration	9.0	10.0	9.0	11.0	9.0	11.0	9.0	8.0	7.0	7.0	7.6	7.7	5.8	7.6	6.3	5.5	4.8	4.1	4.5	5.1
Max. 8-Hr. Concentration	5.6	6.3	6.7	6.7	7.6	8.1	6.6	7.0	5.9	6.0	6.4	6.3	4.5	5.9	4.7	4.1	4.1	3.3	3.2	4.5
Days Above State 8-Hr. Std.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Days Above Nat. 8-Hr. Std.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NITROGEN DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.180	0.171	0.172	0.183	0.193	0.195	0.192	0.187	0.174	0.167	0.160	0.178	0.180	0.178	0.143	0.139	0.137	0.131	0.123	0.125
Max. 1-Hr. Concentration	0.200	0.180	0.240	0.200	0.210	0.200	0.200	0.210	0.140	0.160	0.177	0.199	0.163	0.153	0.154	0.149	0.143	0.129	0.122	0.117
Max. Annual Average	0.040	0.040	0.042	0.047	0.047	0.045	0.041	0.043	0.040	0.042	0.041	0.046	0.038	0.036	0.036	0.039	0.038	0.037	0.036	0.034

SULFUR DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.05	0.04	0.05	0.05	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
Max. Annual Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max. 24-Hr. Concentration	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.00

Table A-98

A portion of San Bernardino County lies within the Mojave Desert Air Basin.

Table 8.1B-7

South Coast Air Basin

County: Orange

OZONE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hour Indicator	0.297	0.295	0.274	0.267	0.246	0.235	0.227	0.219	0.205	0.197	0.189	0.163	0.156	0.137	0.141	0.131	0.131	0.113	0.117	0.124
Peak 8-Hour Indicator	0.196	0.195	0.180	0.174	0.163	0.159	0.154	0.145	0.139	0.133	0.134	0.120	0.112	0.101	0.101	0.094	0.095	0.094	0.091	0.096
4th High 1-Hr. in 3 Yrs	0.290	0.280	0.270	0.260	0.240	0.240	0.240	0.220	0.210	0.190	0.190	0.170	0.156	0.138	0.144	0.130	0.127	0.114	0.119	0.131
Avg. of 4th High 8-Hr. in 3 Yrs	0.163	0.166	0.157	0.152	0.142	0.141	0.138	0.127	0.120	0.114	0.117	0.107	0.100	0.088	0.088	0.084	0.084	0.080	0.080	0.086
Maximum 1-Hr. Concentration	0.320	0.340	0.250	0.240	0.290	0.260	0.210	0.250	0.220	0.190	0.252	0.160	0.150	0.134	0.182	0.116	0.137	0.125	0.136	0.165
Max. 8-Hr. Concentration	0.177	0.208	0.158	0.165	0.195	0.167	0.142	0.145	0.158	0.122	0.172	0.109	0.103	0.100	0.115	0.091	0.110	0.097	0.093	0.105
Days Above State Standard	107	101	101	81	96	81	80	71	63	59	46	39	27	13	22	8	14	12	9	19
Days Above Nat. 1-Hr. Std.	65	63	53	42	45	38	37	32	35	17	9	4	6	3	6	0	2	1	2	5
Days Above Nat. 8-Hr. Std.	75	66	62	54	50	44	39	36	35	25	15	8	9	3	6	1	6	4	1	10

PM_{10} (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)					88	88	158	146	88	115	106	172	101	91	81	122	126	93	80	96
Max. 24-Hr. Concentration (Nat)					132	138	158	146	88	115	106	172	101	91	81	122	126	93	80	96
Annual Average (State)						41.7		45.5	34.4	38.3	37.5	43.3	35.2	38.8	35.8	36.7	39.9	26.4	33.6	32.7
Annual Average (Nat)					46.0	46.9	48.1	45.9	40.0	38.3	37.5	43.5	35.2	38.8	35.8	36.7	39.6	26.5	33.5	32.8
Calc Days Above State 24-Hr Std						122		89	31	78	67	86	37	66	72	37	48	18	31	37
Calc Days Above Nat 24-Hr Std					0	0	6	0	0	0	0	7	0	0	0	0	0	0	0	0

$PM_{2.5}$ (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)																68.6	113.9	70.8	68.6	115.5
Max. 24-Hr. Concentration (Nat)																68.6	113.9	70.8	68.6	115.5
98th Percentile of 24-Hr Conc.																	66.3	45.6	48.1	51.8
Annual Average (State)																	14.7		18.6	
Avg. of Qtrly. Means (Nat)																	20.3	22.0	18.6	17.3

CARBON MONOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 8-Hr. Indicator	11.8	11.6	11.0	11.3	10.9	11.5	11.5	10.8	9.4	8.8	8.7	8.2	8.5	7.3	6.7	6.4	6.7	6.6	5.8	4.6
Max. 1-Hr. Concentration	21.0	22.0	20.0	21.0	20.0	24.0	19.0	21.0	21.0	15.0	16.1	12.7	12.9	11.9	15.0	11.4	13.8	10.7	10.2	8.4
Max. 8-Hr. Concentration	14.4	17.0	10.4	10.6	12.0	12.1	11.7	8.6	9.4	7.7	8.6	8.0	7.4	6.0	7.1	6.4	6.7	4.7	5.3	5.9
Days Above State 8-Hr. Std.	7	9	4	3	9	13	6	0	3	0	0	0	0	0	0	0	0	0	0	0
Days Above Nat. 8-Hr. Std.	5	7	4	2	7	12	5	0	0	0	0	0	0	0	0	0	0	0	0	0

NITROGEN DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.266	0.252	0.236	0.240	0.238	0.241	0.235	0.231	0.221	0.220	0.201	0.196	0.188	0.171	0.141	0.143	0.149	0.150	0.124	0.129
Max. 1-Hr. Concentration	0.250	0.300	0.210	0.220	0.280	0.280	0.220	0.200	0.210	0.200	0.230	0.192	0.160	0.145	0.135	0.165	0.139	0.130	0.116	0.158
Max. Annual Average	0.046	0.043	0.045	0.042	0.046	0.047	0.047	0.045	0.039	0.039	0.041	0.039	0.035	0.033	0.034	0.035	0.029	0.027	0.024	0.028

SULFUR DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.02	0.02	0.01	0.01	0.01	0.02	0.01	0.02	0.02	0.02
Max. Annual Average	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max. 24-Hr. Concentration	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.01

Table A-96

Table 8.1B-8

SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Mass Daily Thresholds		
Pollutant	**Construction**	**Operation**
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants [a]		
NO2 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)	
PM10 24-hour average annual geometric average annual arithmetic mean	10.4 $\mu g/m^3$ (recommended for construction) [b] 2.5 $\mu g/m^3$ (operation) 1.0 $\mu g/m^3$ 20 $\mu g/m^3$	
Sulfate 24-hour average	1 ug/m^3	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)	

[a] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

[b] Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million ug/m^3 = microgram per cubic meter ≥ greater than or equal to

AQMD Preprocessed Meteorological Data

Table 8.1B-9

Station ID & Name			UTM (KM)		LAT/LONG	
Surface	Upper Air	City Name	E-W	N-S	Longitude	Latitude
53071	91919	ANAHEIM	415.0	3742.5	117:55:07	33:49:16
54097	99999	AZUSA	414.9	3777.4	117:55:23	34:08:09
54144	99999	BANNING	510.5	3754.5	116:53:11	33:55:58
51100	99999	BURBANK (AMS)	379.5	3783.0	118:18:27	34:10:58
51067	99999	CANOGA PARK	352.9	3786.0	118:35:48	34:12:23
53112	91919	COMPTON AP	385.5	3750.3	118:14:17	33:53:19
53126	91919	COSTA MESA (AMS)	413.8	3724.2	117:55:47	33:39:21
52075	91919	DOWNTOWN LA	386.9	3770.1	118:13:31	34:04:02
53128	91919	EL TORO	436.0	3720.9	117:41:25	33:37:39
54149	99999	FONTANA	455.4	3773.9	117:29:01	34:06:24
54146	99999	INDIO	572.3	3731.0	116:13:11	33:43:06
53012	91919	KING HARBOR	371.2	3744.4	118:23:30	33:50:00
51108	99999	LA CANADA	388.2	3786.1	118:12:49	34:12:42
53099	91919	LA HABRA	412.0	3754.0	117:57:07	33:55:28
51117	99999	LANCASTER	396.0	3839.5	118:08:08	34:41:38
52118	91919	LENNOX (HAW)	373.0	3755.0	118:22:26	33:55:46
53101	91919	LONG BEACH (AMS)	390.0	3743.0	118:11:19	33:49:24
53127	91919	LOS ALAMITOS	404.5	3739.8	118:01:54	33:47:45
52130	91919	LYNWOOD	388.0	3754.0	118:12:42	33:55:20
52104	91919	MALIBU	344.0	3766.9	118:41:23	34:01:59
51115	99999	NEWHALL (AMS)	355.5	3805.5	118:31:02	34:22:59
54167	99999	NORCO	446.8	3749.0	117:34:31	33:52:54
54145	99999	PALM SPRINGS	542.5	3742.5	116:32:27	33:49:25
51122	99999	PASADENA (AMS)	396.0	3778.5	118:07:41	34:08:38
53134	91919	PICO RIVERA	402.3	3764.1	118:03:29	34:00:53
54109	99999	POMONA	430.8	3769.6	117:44:60	34:03:60
54161	99999	REDLANDS	486.2	3769.4	117:09:00	34:04:00
51107	99999	RESEDA	359.0	3785.0	118:31:49	34:11:54
54139	99999	RIVERSIDE	464.8	3758.6	117:22:50	33:58:10
53137	91919	SANTA ANA CYN	431.0	3748.4	117:44:46	33:52:32
54147	99999	UPLAND	440.0	3773.1	117:39:02	34:05:55
52132	91919	VERNON	387.4	3762.5	118:13:10	33:59:55
54106	99999	WALNUT	420.0	3761.7	117:51:58	33:59:41
52158	91919	WEST LA	372.3	3768.6	118:23:01	34:03:08
53114	91919	WHITTIER (AMS)	405.3	3754.0	118:01:28	33:55:26

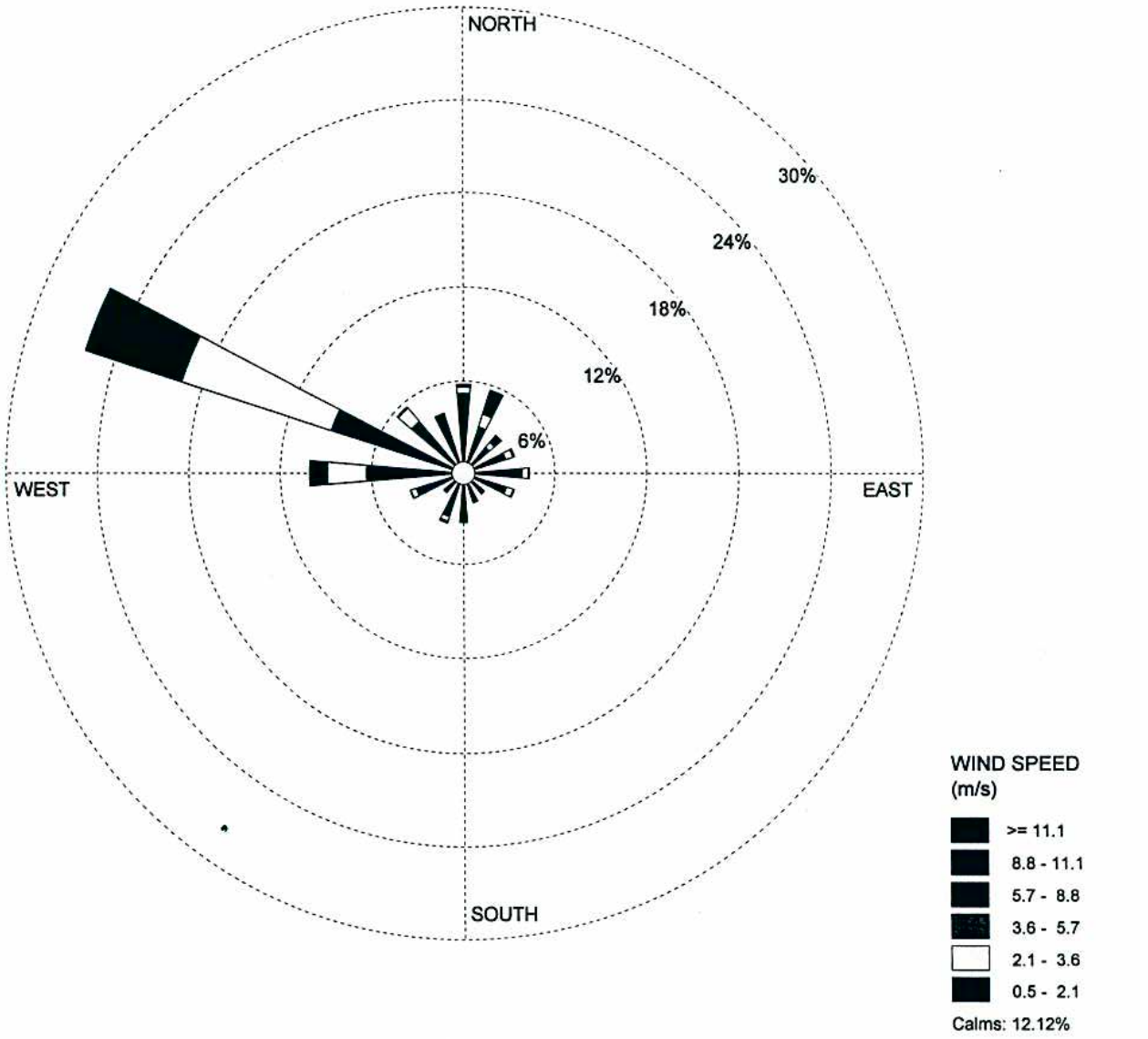
Surface Stations	Upper Air
51 BURBANK	91919 LAX (LOYOLA MARYMOUNT)
52 LAX	99999 ONTARIO (EL MONTE & ONTARIO)
53 LONG BEACH	
54 ONTARIO	

Sun Valley Wind Rose Data

(Riverside Met Station)

WIND ROSE PLOT:

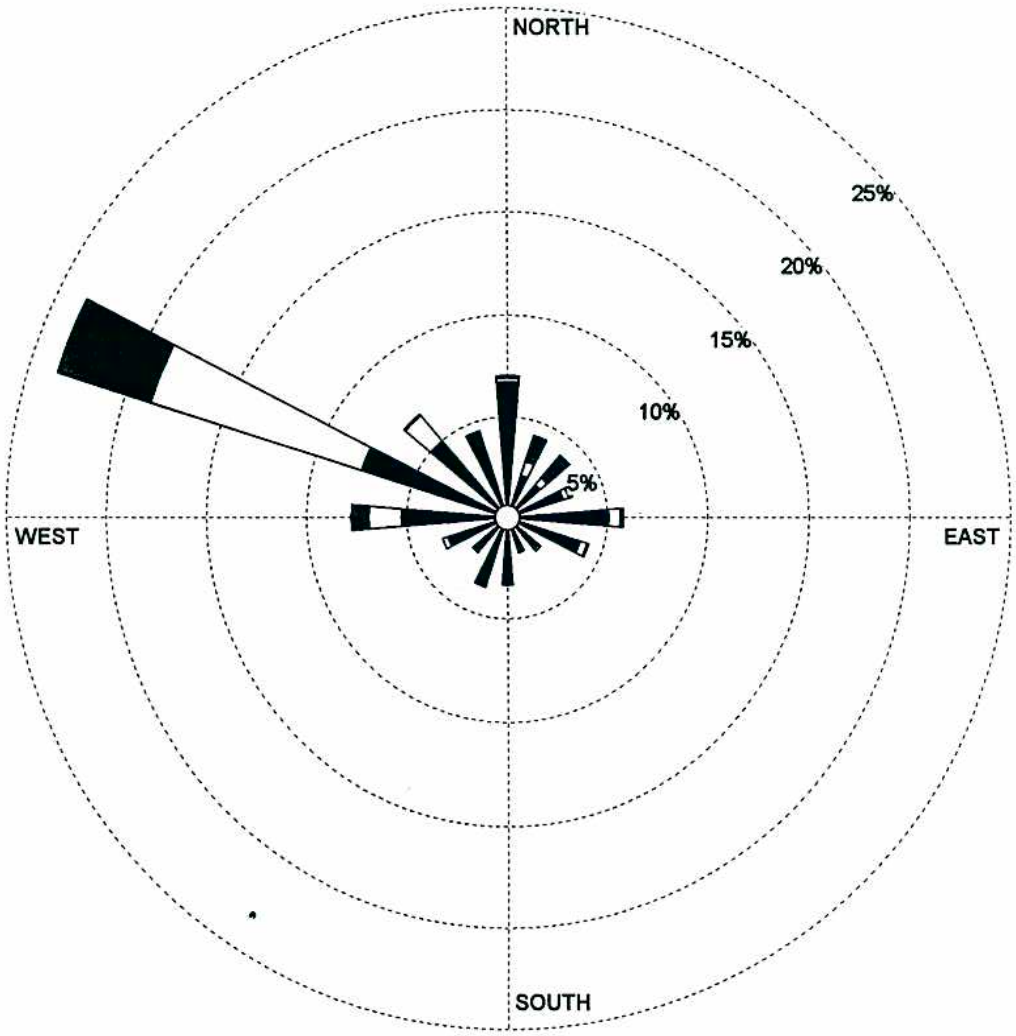
DISPLAY:
Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
Annual	**1981** **Jan 1 - Dec 31** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **12.12%**	TOTAL COUNT: **8760 hrs.**	
	AVG. WIND SPEED: **1.73 m/s**	DATE: **9/6/2005**	PROJECT NO.:

WIND ROSE PLOT:

DISPLAY:
Wind Speed
Direction (blowing from)



WIND SPEED
(m/s)

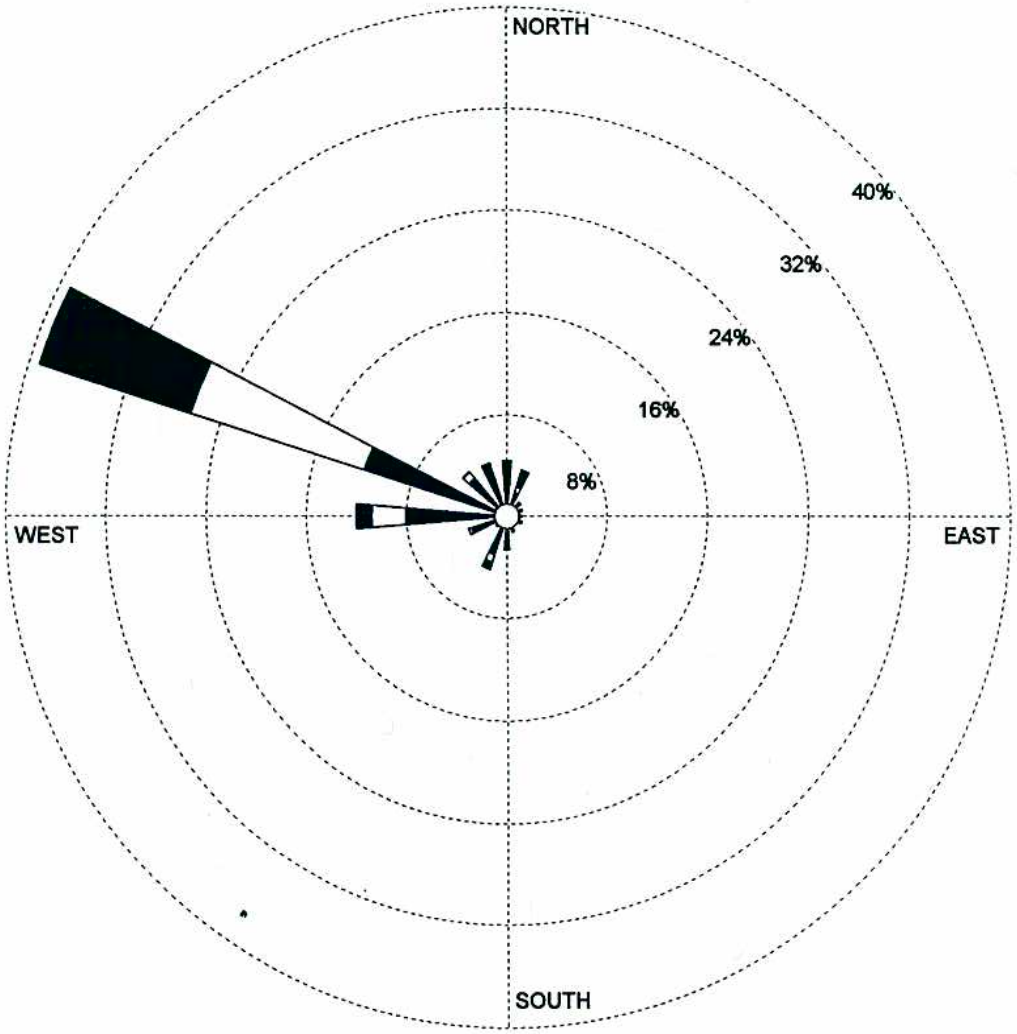
- >= 11.1
- 8.8 - 11.1
- 5.7 - 8.8
- 3.6 - 5.7
- 2.1 - 3.6
- 0.5 - 2.1

Calms: 11.90%

COMMENTS:	DATA PERIOD:	COMPANY NAME:	
Fall	**1981** **Jan 1 - Dec 31** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **11.90%**	TOTAL COUNT: **2184 hrs.**	
	AVG. WIND SPEED: **1.63 m/s**	DATE: **9/6/2005**	PROJECT NO.:

WIND ROSE PLOT:

DISPLAY:
Wind Speed
Direction (blowing from)



WIND SPEED
(m/s)

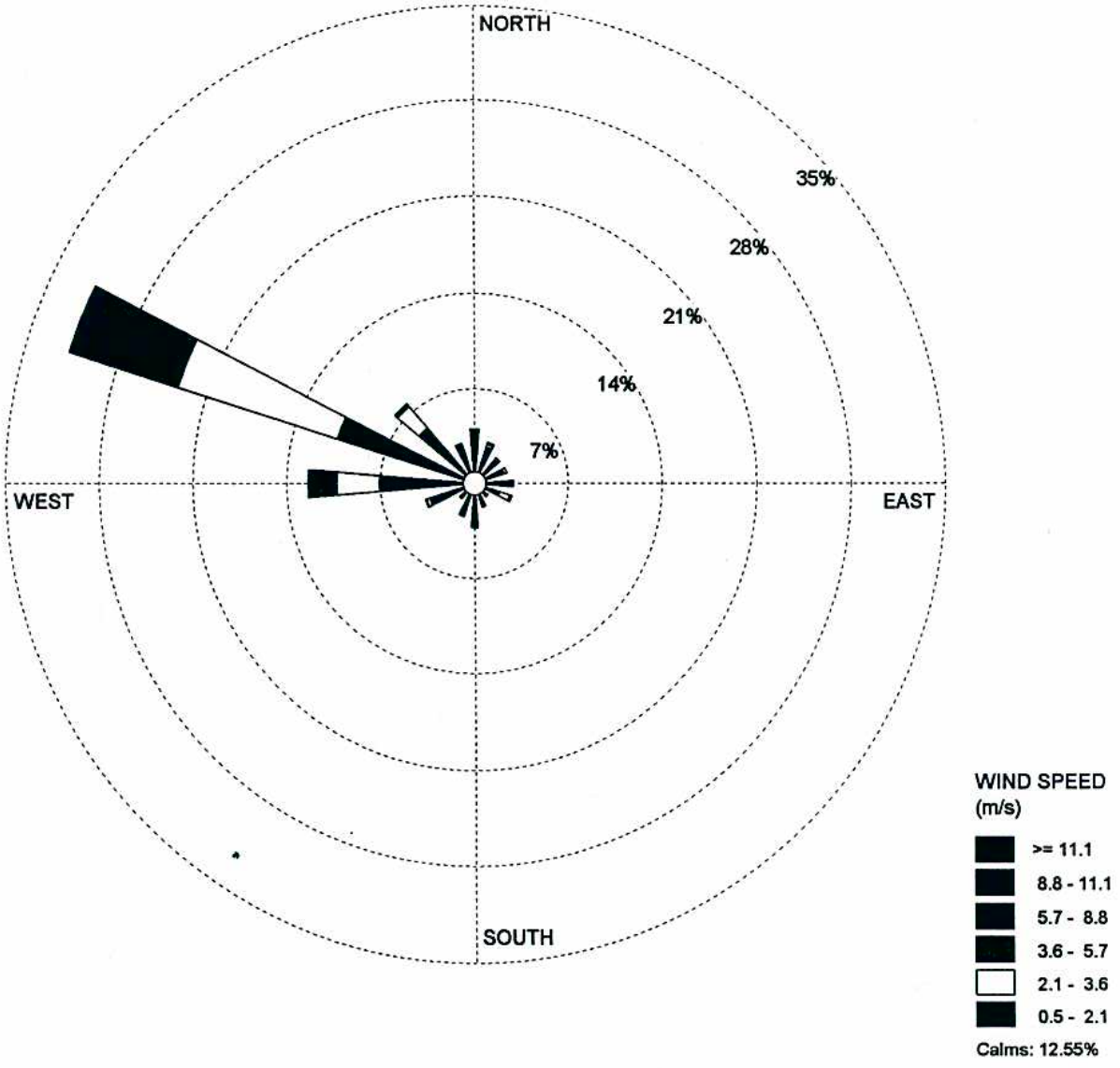
- >= 11.1
- 8.8 - 11.1
- 5.7 - 8.8
- 3.6 - 5.7
- 2.1 - 3.6
- 0.5 - 2.1

Calms: 12.73%

COMMENTS:	DATA PERIOD:	COMPANY NAME:	
Summer	**1981** **Jan 1 - Dec 31** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **12.73%**	TOTAL COUNT: **2208 hrs.**	
	AVG. WIND SPEED: **1.97 m/s**	DATE: **9/6/2005**	PROJECT NO.:

WIND ROSE PLOT:

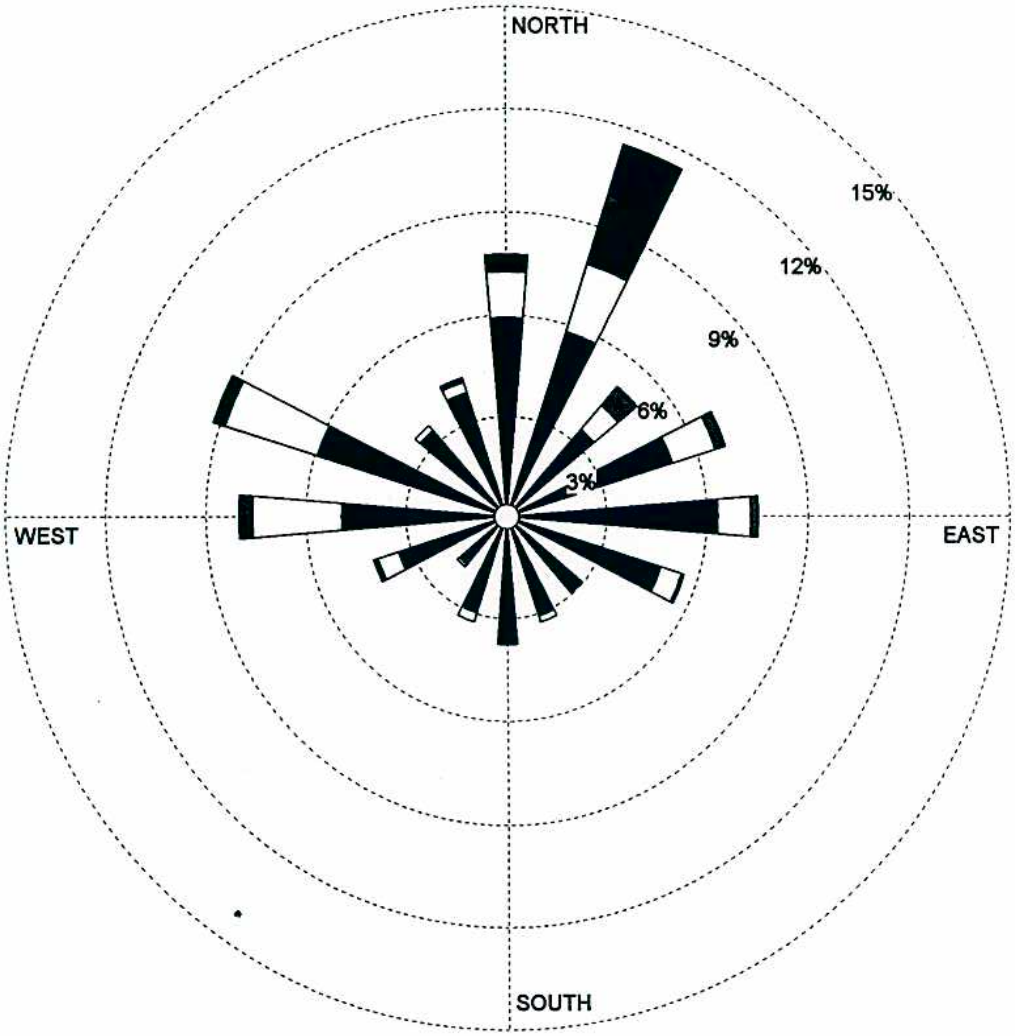
DISPLAY:
Wind Speed
Direction (blowing from)



COMMENTS: **Spring**	DATA PERIOD: **1981 Jan 1 - Dec 31 00:00 - 23:00**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **12.55%**	TOTAL COUNT: **2208 hrs.**	
	AVG. WIND SPEED: **1.80 m/s**	DATE: **9/6/2005**	PROJECT NO.:

WIND ROSE PLOT:

DISPLAY:
Wind Speed
Direction (blowing from)



COMMENTS: **Winter**	DATA PERIOD: **1981 Jan 1 - Dec 31 00:00 - 23:00**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **11.30%**	TOTAL COUNT: **2160 hrs.**	
	AVG. WIND SPEED: **1.51 m/s**	DATE: **9/6/2005**	PROJECT NO.:

Climatic Data Summaries

(Sun City and San Jacinto)

Average weather in Sun City, California

Based on data reported by over 4,000 weather stations

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average temp. (°F)	51.2	53.3	55.5	60.4	66.3	72.8	78.3	78.9	74.8	66.6	57.1	51.0
High temperature (°F)	66.2	68.4	69.7	76.7	82.7	91.6	97.8	98.1	92.6	84.2	74.2	67.5
Low temperature (°F)	36.2	38.3	41.2	44.1	49.8	53.9	58.8	59.8	56.9	49.0	40.1	34.5
Precipitation (in)	2.6	2.9	2.3	0.6	0.3	0.0	0.0	0.2	0.2	0.3	0.8	1.1

Back to the top

Normal climate around Sun City, California

Based on data reported by main weather stations

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Days with precip.	6	5	5	3	1	0	0	0	1	2	3	5
Wind speed (mph)	5.4	6.1	6.9	7.5	7.3	7.2	7.0	6.8	6.4	5.8	5.3	5.1
Morning humidity (%)	75	77	79	79	80	81	82	82	82	80	78	76
Afternoon humidity (%)	54	55	56	53	57	58	56	56	56	56	55	54
Sunshine (%)	72	71	70	69	60	59	69	71	70	69	75	73
Days clear of clouds	12	10	11	12	10	12	17	18	15	13	13	13
Partly cloudy days	8	7	9	10	13	12	11	10	11	11	8	8
Cloudy days	11	11	11	8	9	7	3	2	4	7	8	10
Snowfall (in)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SAN JACINTO, CALIFORNIA (047810)

Period of Record Monthly Climate Summary

Period of Record : 7/ 1/1948 to 5/31/1978

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	65.2	67.6	69.4	75.0	82.0	91.1	99.6	99.4	94.4	84.8	74.1	66.9	80.8
Average Min. Temperature (F)	33.9	36.0	38.3	42.1	47.1	51.1	56.4	56.5	53.2	45.5	38.8	33.9	44.4
Average Total Precipitation (in.)	2.32	1.81	1.84	1.04	0.39	0.05	0.11	0.18	0.45	0.42	1.31	1.47	11.40
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 98.2% Min. Temp.: 98.2% Precipitation: 98.4% Snowfall: 98.4% Snow Depth: 98.3%

SAN JACINTO, CALIFORNIA

Period of Record General Climate Summary - Temperature

Station:(047810) SAN JACINTO

From Year=1948 To Year=1978

	Monthly Averages			Daily Extremes				Monthly Extremes				Max. Temp.	
	Max.	Min.	Mean	High	Date	Low	Date	Highest Mean	Year	Lowest Mean	Year	>= 90 F	<= 32
	F	F	F	F	dd/yyyy or yyyymmdd	F	dd/yyyy or yyyymmdd	F	-	F	-	# Days	# Da
January	65.2	33.9	49.6	89	17/1976	17	14/1963	53.5	76	44.5	55	0.0	0
February	67.6	36.0	51.8	95	03/1963	16	20/1953	59.4	63	46.2	56	0.1	0
March	69.4	38.3	53.8	94	04/1972	17	02/1971	61.5	72	48.1	54	0.3	0
April	75.0	42.1	58.6	104	03/1961	24	09/1953	64.1	59	50.6	67	3.2	0
May	82.0	47.1	64.5	109	21/1967	32	12/1953	68.2	73	58.7	53	8.3	0
June	91.1	51.1	71.1	116	15/1961	31	02/1967	75.5	61	65.7	52	17.5	0
July	99.6	56.4	78.0	116	16/1960	41	15/1952	81.4	59	73.6	48	29.8	0
August	99.4	56.5	77.9	114	19/1950	37	27/1954	83.5	67	71.8	54	28.7	0
September	94.4	53.2	73.8	115	06/1955	36	13/1954	77.4	69	69.6	65	21.6	0
October	84.8	45.5	65.2	107	12/1950	24	30/1971	70.7	64	61.0	57	11.2	0
November	74.1	38.8	56.4	99	11/1963	19	17/1958	62.3	49	50.2	52	1.5	0
December	66.9	33.9	50.4	90	03/1958	17	24/1953	56.1	77	45.7	71	0.0	0
Annual	80.8	44.4	62.6	116	19600716	16	19530220	64.0	77	60.1	52	122.4	0
Winter	66.6	34.6	50.6	95	19630203	16	19530220	54.0	63	47.6	52	0.1	0
Spring	75.4	42.5	59.0	109	19670521	17	19710302	63.3	72	55.6	53	11.9	0
Summer	96.7	54.6	75.7	116	19600716	31	19670602	78.5	61	70.9	54	76.1	0
Fall	84.4	45.9	65.1	115	19550906	19	19581117	68.4	67	62.0	57	34.3	0

Table updated on Jul 22, 2005

For monthly and annual means, thresholds, and sums:
Months with 5 or more missing days are not considered
Years with 1 or more missing months are not considered
Seasons are climatological not calendar seasons

Winter = Dec., Jan., and Feb. Spring = Mar., Apr., and May

Summer = Jun., Jul., and Aug. Fall = Sep., Oct., and Nov.

SAN JACINTO, CALIFORNIA

Period of Record General Climate Summary - Precipitation

Station:(047810) SAN JACINTO														
From Year=1948 To Year=1978														
	Precipitation											Total Snowfall		
	Mean	High	Year	Low	Year	1 Day Max.		>= 0.01 in.	>= 0.10 in.	>= 0.50 in.	>= 1.00 in.	Mean	High	Year
	in.	in.	-	in.	-	in.	dd/yyyy or yyyymmdd	# Days	# Days	# Days	# Days	in.	in.	-
January	2.32	8.41	78	0.00	72	1.99	25/1969	5	4	2	1	0.0	0.0	50
February	1.81	7.07	69	0.00	67	2.13	04/1958	5	4	1	0	0.0	0.0	49
March	1.84	7.32	78	0.00	56	2.00	01/1970	6	4	1	0	0.0	0.0	49
April	1.04	4.15	58	0.00	50	1.54	01/1958	4	2	1	0	0.0	0.0	49
May	0.39	3.28	77	0.00	52	1.52	08/1977	2	1	0	0	0.0	0.0	49
June	0.05	0.54	72	0.00	49	0.29	10/1976	1	0	0	0	0.0	0.0	49
July	0.11	0.58	65	0.00	48	0.49	24/1952	1	0	0	0	0.0	0.0	48
August	0.18	1.99	77	0.00	49	1.33	17/1977	1	1	0	0	0.0	0.0	49
September	0.45	4.23	76	0.00	49	1.74	10/1976	1	1	0	0	0.0	0.0	49
October	0.42	3.95	57	0.00	52	1.39	23/1976	2	1	0	0	0.0	0.0	49
November	1.31	7.10	65	0.00	56	2.11	23/1965	4	2	1	0	0.0	0.0	49
December	1.47	4.69	66	0.00	58	2.17	30/1951	4	3	1	0	0.2	3.0	67
Annual	11.40	19.15	52	4.64	61	2.17	19511230	37	23	8	2	0.2	3.0	67
Winter	5.60	16.25	78	0.96	61	2.17	19511230	15	11	4	1	0.2	3.0	68
Spring	3.28	10.31	58	0.17	72	2.00	19700301	12	7	2	1	0.0	0.0	49
Summer	0.33	2.04	77	0.00	49	1.33	19770817	2	1	0	0	0.0	0.0	49
Fall	2.19	7.40	65	0.16	77	2.11	19651123	7	4	1	1	0.0	0.0	49

Table updated on Jul 22, 2005

For monthly and annual means, thresholds, and sums:
Months with 5 or more missing days are not considered
Years with 1 or more missing months are not considered
Seasons are climatological not calendar seasons

Winter = Dec., Jan., and Feb. Spring = Mar., Apr., and May

Summer = Jun., Jul., and Aug. Fall = Sep., Oct., and Nov.

SAN JACINTO, CALIFORNIA

Period of Record Daily Climate Summary

Daily Records for station 047810 SAN JACINTO state: ca

For temperature and precipitation, multi-day accumulations
are not considered either for records or averages.
The year given is the year of latest occurrence.

Period requested -- Begin : 1/ 1/1890 -- End : 3/31/2005
Period used -- Begin : 7/ 1/1948 -- End : 5/31/1978

Cooling degree threshold = 65.00 Heating degree threshold = 65.00

AVG Multi-year unsmoothed average of the indicated quantity
HI Highest value of indicated quantity for this day of year
LO Lowest value of indicated quantity for this day of year
YR Latest year of occurrence of the extreme value
NO Number of years with data for this day of year.
Units: English (inches and degrees F)

		Maximum Temperature						Minimum Temperature						Precipitation				
MO	DY	AVG	NO	HI	YR	LO	YR	AVG	NO	HI	YR	LO	YR	AVG	NO	HIGH	YR	AVG
1	1	64	28	88	1964	50	1960	30	29	47	1962	20	1954	0.011	29	0.33	1974	0.00
1	2	62	29	80	1969	50	1974	30	29	47	1959	18	1976	0.030	29	0.41	1955	0.00
1	3	62	29	82	1969	47	1974	30	28	47	1977	17	1970	0.068	29	0.72	1977	0.00
1	4	63	29	82	1969	47	1974	29	29	46	1978	21	1971	0.091	29	1.44	1974	0.00
1	5	64	28	84	1969	51	1974	30	29	47	1978	20	1972	0.064	29	1.16	1978	0.00
1	6	64	28	86	1969	46	1974	32	28	47	1959	20	1950	0.139	29	1.20	1957	0.00
1	7	64	28	88	1962	46	1974	34	28	47	1978	20	1971	0.104	29	1.35	1974	0.00
1	8	64	29	85	1962	49	1974	34	29	53	1953	23	1965	0.058	29	1.51	1974	0.00
1	9	65	29	83	1962	49	1974	32	29	44	1953	22	1971	0.039	29	0.41	1978	0.00
1	10	64	29	79	1953	48	1955	35	29	48	1978	18	1954	0.151	29	1.51	1978	0.00
1	11	65	29	79	1961	48	1951	34	28	46	1978	22	1962	0.036	29	0.38	1970	0.00
1	12	64	29	79	1956	48	1950	35	29	48	1970	20	1962	0.075	29	0.76	1960	0.00
1	13	65	29	81	1975	50	1960	34	29	54	1957	20	1964	0.068	29	1.27	1957	0.00
1	14	66	29	85	1975	45	1950	33	29	51	1969	17	1963	0.121	29	1.40	1969	0.00
1	15	67	30	86	1976	48	1960	34	30	54	1969	22	1963	0.057	30	1.43	1978	0.00
1	16	67	30	86	1976	49	1955	35	30	51	1970	22	1964	0.113	30	1.63	1952	0.00
1	17	68	30	89	1976	54	1978	36	30	53	1970	23	1963	0.043	30	0.58	1973	0.00
1	18	67	30	88	1971	48	1955	35	30	44	1954	23	1963	0.092	30	1.28	1952	0.00
1	19	66	30	88	1971	45	1949	37	30	48	1951	25	1958	0.127	30	1.53	1954	0.00
1	20	64	30	81	1975	48	1954	37	30	50	1974	19	1963	0.085	30	0.59	1962	0.00
1	21	64	30	81	1975	48	1962	37	30	53	1969	25	1958	0.070	30	0.66	1964	0.00
1	22	64	30	80	1968	45	1949	35	30	50	1969	22	1966	0.055	30	0.68	1967	0.00
1	23	66	30	85	1951	47	1949	34	30	48	1956	25	1958	0.059	30	1.15	1967	0.00
1	24	66	30	86	1951	46	1949	35	30	49	1969	24	1966	0.051	30	0.63	1969	0.00
1	25	65	30	86	1951	45	1949	36	30	56	1969	24	1966	0.125	30	1.99	1969	0.02
1	26	64	30	83	1971	49	1957	36	30	51	1969	21	1950	0.180	30	1.75	1956	0.00
1	27	65	30	83	1976	45	1957	34	30	49	1956	22	1950	0.050	30	1.04	1956	0.00
1	28	67	30	85	1976	42	1957	33	30	49	1951	25	1966	0.017	30	0.28	1968	0.00
1	29	67	30	85	1965	48	1957	35	30	46	1951	21	1975	0.062	30	0.74	1950	0.00
1	30	66	30	83	1971	50	1975	34	30	49	1978	23	1949	0.037	30	0.65	1966	0.00
1	31	66	30	86	1976	51	1957	34	30	50	1967	21	1972	0.028	30	0.25	1955	0.00
2	1	66	30	84	1976	52	1966	35	30	54	1963	24	1949	0.006	30	0.14	1963	0.00
2	2	67	30	81	1976	51	1955	34	30	46	1968	23	1956	0.019	30	0.48	1960	0.00
2	3	69	30	95	1963	45	1949	34	30	54	1958	22	1955	0.057	30	0.94	1975	0.00
2	4	69	30	88	1963	50	1949	35	30	49	1976	19	1955	0.099	30	2.12	1958	0.00
2	5	67	30	90	1963	49	1976	35	30	50	1978	22	1955	0.077	30	0.76	1969	0.00
2	6	68	30	92	1963	56	1969	37	30	51	1978	22	1955	0.139	30	1.11	1969	0.00

2	7	68	30	86	1963	51	1949	38	30	52	1954	24	1964	0.048	29	0.44	1976	0.00
2	8	67	30	84	1970	50	1959	38	30	50	1976	26	1955	0.108	30	1.30	1959	0.00
2	9	66	30	89	1951	54	1959	38	30	52	1962	23	1956	0.115	30	1.64	1976	0.00
2	10	67	30	86	1971	53	1966	38	30	56	1957	23	1965	0.153	30	2.11	1963	0.00
2	11	67	30	87	1971	50	1978	37	30	52	1957	24	1965	0.115	30	1.14	1959	0.00
2	12	66	30	88	1971	49	1949	37	30	48	1962	20	1965	0.039	30	0.28	1964	0.00
2	13	66	30	84	1977	48	1949	36	30	47	1969	23	1953	0.081	30	0.94	1978	0.00
2	14	66	30	84	1977	51	1954	37	30	52	1963	22	1949	0.041	30	0.87	1954	0.00
2	15	67	30	86	1977	54	1956	35	30	46	1962	23	1949	0.004	30	0.07	1962	0.00
2	16	68	30	88	1977	49	1956	36	30	52	1957	24	1965	0.049	30	0.63	1959	0.00
2	17	69	30	87	1977	55	1956	36	30	51	1957	21	1956	0.058	30	1.23	1955	0.00
2	18	68	30	88	1977	53	1952	37	30	54	1968	25	1975	0.027	30	0.71	1969	0.00
2	19	67	30	89	1977	46	1969	35	30	50	1957	24	1955	0.071	30	1.01	1958	0.00
2	20	67	30	87	1977	49	1962	34	30	49	1957	16	1953	0.014	30	0.32	1962	0.00
2	21	69	30	85	1965	53	1959	35	30	51	1968	19	1953	0.027	30	0.48	1962	0.00
2	22	68	30	81	1978	52	1969	35	30	52	1977	23	1975	0.025	30	0.58	1969	0.00
2	23	68	30	86	1968	51	1969	36	30	51	1957	26	1975	0.046	30	0.33	1969	0.00
2	24	69	30	87	1968	52	1977	37	30	49	1958	26	1955	0.071	30	1.00	1969	0.00
2	25	69	30	88	1968	50	1962	36	30	50	1958	26	1960	0.082	30	1.99	1969	0.00
2	26	68	30	85	1963	47	1962	36	30	44	1960	25	1964	0.015	30	0.19	1955	0.00
2	27	68	30	86	1972	47	1951	36	30	52	1968	23	1971	0.053	30	0.85	1955	0.00
2	28	69	29	85	1967	54	1960	37	30	53	1957	26	1962	0.126	30	1.09	1970	0.00
2	29	66	7	79	1968	59	1952	39	7	49	1968	30	1956	0.133	7	0.47	1960	0.00
3	1	66	30	87	1967	48	1951	38	30	50	1978	26	1962	0.233	30	2.00	1970	0.00
3	2	65	30	84	1972	51	1966	37	30	50	1978	17	1971	0.118	30	0.82	1978	0.00
3	3	66	30	85	1975	47	1976	36	30	49	1957	24	1971	0.027	30	0.52	1976	0.00
3	4	67	30	94	1972	51	1967	36	30	47	1961	23	1966	0.022	30	0.45	1978	0.00
3	5	68	30	93	1972	58	1978	36	30	49	1975	26	1965	0.084	30	1.64	1978	0.00
3	6	68	30	89	1972	55	1962	37	30	47	1975	24	1976	0.116	30	1.24	1975	0.00
3	7	69	30	82	1957	49	1952	36	30	50	1975	27	1956	0.078	30	1.49	1952	0.00
3	8	70	30	85	1955	51	1974	37	30	47	1968	25	1964	0.141	30	1.12	1975	0.00
3	9	67	30	87	1972	51	1962	38	30	51	1957	27	1964	0.011	30	0.11	1963	0.00
3	10	64	30	83	1972	49	1952	39	30	47	1975	29	1949	0.056	30	0.64	1969	0.00
3	11	65	30	85	1972	51	1952	38	30	47	1978	25	1977	0.078	30	0.66	1973	0.00
3	12	66	30	85	1972	53	1958	39	30	49	1967	25	1954	0.029	30	0.42	1978	0.00
3	13	67	30	85	1951	48	1952	38	30	52	1960	20	1954	0.048	30	0.38	1967	0.00
3	14	71	30	85	1972	53	1952	36	30	49	1955	22	1954	0.010	30	0.29	1967	0.00
3	15	71	30	92	1972	56	1965	36	30	45	1961	25	1977	0.077	30	0.85	1965	0.00
3	16	71	30	92	1972	50	1952	38	30	50	1958	24	1954	0.109	30	1.80	1958	0.00
3	17	70	30	91	1978	49	1954	40	30	54	1964	28	1955	0.079	30	1.16	1963	0.00
3	18	71	30	87	1960	53	1952	38	30	50	1978	27	1955	0.003	30	0.08	1963	0.00
3	19	72	30	88	1972	55	1962	39	30	49	1967	30	1955	0.022	30	0.64	1962	0.00
3	20	72	30	87	1960	53	1954	40	30	50	1978	28	1970	0.045	30	0.64	1973	0.00
3	21	73	30	90	1960	56	1973	38	30	54	1978	27	1952	0.038	30	0.45	1958	0.00
3	22	70	30	85	1976	53	1964	39	30	51	1965	28	1952	0.122	30	1.30	1954	0.00
3	23	69	30	87	1956	49	1964	38	29	49	1965	25	1957	0.058	30	0.84	1964	0.00
3	24	71	30	88	1956	50	1954	40	29	48	1974	31	1957	0.037	30	0.50	1964	0.00
3	25	71	30	86	1978	49	1977	39	30	51	1960	31	1964	0.074	30	0.97	1977	0.00
3	26	71	30	85	1978	57	1973	41	30	50	1974	29	1954	0.003	30	0.06	1977	0.00
3	27	72	30	86	1968	51	1973	41	30	50	1974	28	1975	0.024	30	0.29	1958	0.00
3	28	72	30	91	1971	55	1961	41	30	50	1978	30	1972	0.020	30	0.31	1963	0.00
3	29	73	30	93	1971	51	1953	40	30	53	1978	32	1949	0.003	30	0.09	1953	0.00
3	30	72	30	93	1966	52	1954	40	30	53	1974	25	1967	0.007	30	0.12	1954	0.00
3	31	71	30	93	1966	50	1949	41	30	51	1978	30	1977	0.063	30	0.72	1978	0.00
4	1	72	30	96	1966	54	1958	41	30	51	1969	32	1954	0.122	30	1.54	1958	0.00
4	2	71	30	95	1961	55	1958	41	30	52	1969	29	1956	0.062	30	0.74	1968	0.00
4	3	74	30	104	1961	56	1958	39	30	52	1966	28	1955	0.049	30	0.72	1958	0.00
4	4	75	30	95	1961	50	1965	40	30	50	1961	30	1956	0.046	30	0.55	1951	0.00
4	5	76	30	96	1960	56	1951	41	30	53	1961	26	1955	0.005	30	0.07	1955	0.00
4	6	73	30	91	1977	55	1975	42	30	53	1961	29	1955	0.034	30	0.64	1975	0.00
4	7	73	30	92	1962	52	1975	41	30	52	1959	33	1975	0.075	30	1.29	1958	0.00
4	8	75	30	90	1962	53	1975	41	30	55	1963	32	1949	0.050	30	0.77	1965	0.00
4	9	75	30	88	1960	54	1965	40	30	48	1966	24	1953	0.035	29	0.45	1965	0.00

4	10	74	30	92	1949	56	1965	42	30	52	1966	29	1953	0.051	30	0.93	1952	0.00
4	11	75	30	93	1962	51	1967	41	30	51	1969	25	1953	0.038	30	0.98	1967	0.00
4	12	77	30	98	1962	50	1965	41	30	53	1969	28	1953	0.008	30	0.13	1976	0.00
4	13	77	30	98	1962	52	1956	42	30	57	1969	32	1953	0.068	30	1.24	1956	0.00
4	14	74	30	96	1962	55	1956	42	30	53	1969	29	1953	0.012	30	0.22	1971	0.00
4	15	77	30	97	1964	54	1976	43	30	54	1957	31	1970	0.009	30	0.18	1976	0.00
4	16	77	30	96	1962	55	1970	42	30	51	1971	33	1967	0.018	30	0.48	1978	0.00
4	17	74	30	94	1950	55	1970	43	30	55	1971	31	1976	0.039	30	0.64	1963	0.00
4	18	72	30	94	1962	59	1967	43	30	51	1964	30	1968	0.016	30	0.18	1957	0.00
4	19	73	30	97	1950	53	1972	43	30	51	1959	28	1955	0.036	30	0.62	1967	0.00
4	20	76	30	97	1958	57	1967	42	30	52	1951	29	1972	0.030	30	0.58	1957	0.00
4	21	76	30	95	1949	55	1967	43	30	51	1951	31	1955	0.040	30	0.78	1953	0.00
4	22	77	30	95	1962	52	1957	42	30	54	1950	30	1971	0.021	30	0.33	1967	0.00
4	23	76	30	99	1962	57	1957	44	30	53	1969	34	1970	0.005	30	0.12	1960	0.00
4	24	76	30	92	1965	61	1967	43	30	51	1959	33	1961	0.006	30	0.13	1967	0.00
4	25	75	30	92	1965	58	1971	44	30	55	1950	31	1961	0.024	30	0.53	1951	0.00
4	26	74	30	94	1973	57	1963	43	30	53	1950	33	1964	0.039	30	0.57	1963	0.00
4	27	76	30	94	1965	58	1970	43	30	53	1950	32	1955	0.024	30	0.48	1960	0.00
4	28	76	30	98	1961	55	1952	44	30	58	1965	32	1961	0.036	30	0.45	1964	0.00
4	29	76	30	99	1959	58	1964	45	30	53	1965	28	1970	0.018	30	0.39	1951	0.00
4	30	78	30	96	1976	57	1973	44	30	54	1958	33	1970	0.021	30	0.57	1951	0.00
5	1	79	30	98	1966	54	1955	45	30	55	1959	33	1967	0.023	30	0.68	1955	0.00
5	2	81	30	102	1966	56	1955	45	30	54	1958	32	1954	0.000	30	0.01	1955	0.00
5	3	79	30	98	1966	61	1950	45	30	53	1968	33	1967	0.003	30	0.04	1960	0.00
5	4	77	30	92	1962	61	1964	46	30	54	1968	38	1954	0.004	30	0.04	1975	0.00
5	5	77	30	93	1962	57	1971	44	30	54	1956	34	1959	0.006	30	0.19	1969	0.00
5	6	77	30	96	1963	55	1964	45	30	53	1972	36	1975	0.022	30	0.32	1964	0.00
5	7	78	30	94	1962	58	1964	45	30	54	1958	36	1975	0.037	30	0.82	1976	0.00
5	8	80	30	102	1961	62	1955	46	30	54	1974	34	1965	0.064	30	1.52	1977	0.00
5	9	80	30	96	1961	57	1977	46	30	56	1974	36	1953	0.041	30	0.93	1977	0.00
5	10	82	30	102	1960	61	1966	47	30	55	1958	36	1953	0.022	30	0.35	1957	0.00
5	11	82	30	103	1960	62	1957	46	30	54	1969	34	1953	0.028	30	0.76	1957	0.00
5	12	82	30	102	1976	59	1957	46	30	55	1976	32	1953	0.013	30	0.19	1957	0.00
5	13	82	30	103	1976	62	1957	46	30	58	1971	36	1953	0.001	30	0.04	1977	0.00
5	14	80	30	102	1972	58	1949	47	30	55	1960	39	1963	0.031	30	0.37	1951	0.00
5	15	81	30	103	1970	60	1953	47	30	54	1960	38	1968	0.014	30	0.26	1962	0.00
5	16	83	30	103	1967	58	1962	47	30	53	1960	35	1955	0.007	30	0.09	1949	0.00
5	17	85	30	102	1970	57	1949	48	30	60	1973	37	1955	0.006	30	0.14	1962	0.00
5	18	85	30	97	1968	61	1949	48	30	55	1969	38	1955	0.000	30	0.01	1949	0.00
5	19	85	30	98	1966	59	1949	47	30	54	1973	40	1955	0.010	30	0.13	1957	0.00
5	20	84	30	101	1967	63	1975	46	30	52	1966	34	1974	0.006	30	0.19	1975	0.00
5	21	84	30	109	1967	68	1975	47	30	54	1966	40	1972	0.003	30	0.07	1957	0.00
5	22	83	30	102	1967	70	1971	47	30	55	1969	38	1975	0.000	30	0.00	1978	0.00
5	23	81	30	99	1949	60	1965	48	30	56	1967	40	1952	0.001	30	0.04	1977	0.00
5	24	82	30	98	1949	55	1977	48	30	55	1969	38	1960	0.017	30	0.52	1977	0.00
5	25	83	30	107	1974	66	1955	48	30	62	1964	37	1953	0.003	30	0.08	1955	0.00
5	26	86	30	107	1974	67	1962	49	29	57	1974	33	1953	0.001	30	0.02	1970	0.00
5	27	85	30	106	1968	64	1971	49	30	57	1968	34	1953	0.008	30	0.25	1971	0.00
5	28	85	30	106	1973	59	1971	50	30	56	1976	40	1964	0.006	30	0.14	1971	0.00
5	29	86	30	104	1978	59	1967	51	30	58	1972	40	1964	0.005	30	0.11	1967	0.00
5	30	84	30	102	1969	59	1967	50	30	59	1972	39	1953	0.001	30	0.03	1967	0.00
5	31	84	29	102	1972	65	1967	50	29	60	1972	41	1954	0.000	30	0.00	1978	0.00
6	1	86	29	106	1970	63	1965	49	29	59	1972	40	1971	0.000	29	0.00	1977	0.00
6	2	88	29	109	1970	68	1971	48	29	59	1970	31	1967	0.000	29	0.00	1977	0.00
6	3	87	29	106	1957	74	1971	50	29	58	1972	39	1953	0.000	29	0.00	1977	0.00
6	4	88	29	104	1957	74	1962	50	29	61	1957	40	1967	0.001	29	0.03	1972	0.00
6	5	87	29	104	1973	75	1967	50	29	68	1977	40	1951	0.002	29	0.06	1972	0.00
6	6	86	29	110	1973	69	1963	51	29	60	1977	40	1967	0.002	29	0.06	1972	0.00
6	7	85	29	108	1973	63	1968	52	29	61	1972	40	1954	0.000	29	0.00	1977	0.00
6	8	85	29	109	1973	64	1968	51	29	60	1972	40	1950	0.004	29	0.11	1968	0.00
6	9	84	29	101	1973	66	1971	51	29	59	1972	43	1952	0.004	29	0.07	1972	0.00
6	10	84	29	102	1949	63	1967	49	29	59	1972	35	1954	0.013	29	0.29	1976	0.00
6	11	88	29	102	1975	66	1969	50	29	58	1957	39	1953	0.003	29	0.04	1971	0.00

6	12	88	29	104	1956	65	1967	50	29	58	1971	39	1952	0.001	29	0.04	1967	0.00
6	13	89	29	106	1966	66	1967	51	29	59	1959	41	1952	0.001	29	0.02	1967	0.00
6	14	92	29	112	1961	66	1962	51	29	58	1957	40	1952	0.000	29	0.00	1977	0.00
6	15	91	29	116	1961	59	1962	51	29	58	1969	40	1952	0.004	29	0.13	1962	0.00
6	16	90	29	112	1961	67	1965	52	29	62	1958	42	1957	0.000	29	0.00	1977	0.00
6	17	91	29	102	1977	72	1953	51	29	58	1961	42	1957	0.000	29	0.00	1977	0.00
6	18	93	29	105	1973	61	1975	51	29	59	1968	44	1965	0.000	29	0.00	1977	0.00
6	19	94	29	107	1961	69	1975	52	29	62	1966	44	1974	0.000	29	0.00	1977	0.00
6	20	95	29	107	1971	80	1975	51	29	58	1961	42	1953	0.001	29	0.04	1972	0.00
6	21	97	29	112	1973	78	1969	52	29	63	1972	44	1970	0.008	29	0.22	1972	0.00
6	22	96	29	112	1973	77	1972	53	29	60	1949	43	1970	0.001	29	0.04	1972	0.00
6	23	96	29	110	1973	74	1965	54	29	68	1961	48	1966	0.000	29	0.00	1977	0.00
6	24	96	29	109	1970	80	1969	54	28	62	1961	44	1963	0.001	29	0.04	1969	0.00
6	25	95	29	110	1964	78	1955	53	29	65	1957	43	1950	0.000	29	0.01	1965	0.00
6	26	95	28	108	1974	77	1954	53	28	67	1957	43	1951	0.000	28	0.00	1977	0.00
6	27	97	29	112	1974	82	1954	53	29	62	1959	45	1951	0.000	29	0.00	1977	0.00
6	28	96	29	111	1974	73	1952	52	29	62	1976	43	1953	0.000	29	0.00	1977	0.00
6	29	97	29	113	1972	79	1955	52	29	64	1956	44	1954	0.000	29	0.00	1977	0.00
6	30	98	29	110	1969	84	1955	51	29	62	1977	41	1964	0.000	29	0.00	1977	0.00
7	1	99	30	110	1969	81	1955	51	30	63	1950	42	1974	0.000	30	0.00	1977	0.00
7	2	98	30	111	1950	82	1955	53	30	62	1959	44	1954	0.000	30	0.00	1977	0.00
7	3	99	30	113	1973	84	1955	53	30	67	1970	45	1962	0.000	30	0.00	1977	0.00
7	4	99	30	116	1973	87	1955	53	30	64	1970	43	1956	0.000	30	0.00	1977	0.00
7	5	99	30	113	1973	90	1963	54	30	69	1970	42	1948	0.000	30	0.00	1977	0.00
7	6	98	30	109	1976	84	1969	54	30	71	1950	45	1960	0.001	30	0.03	1950	0.00
7	7	100	30	109	1976	83	1968	53	30	66	1968	43	1952	0.007	30	0.21	1968	0.00
7	8	100	30	111	1961	89	1950	55	30	63	1968	47	1963	0.001	30	0.04	1968	0.00
7	9	101	30	111	1958	89	1950	55	30	65	1950	46	1960	0.000	30	0.00	1977	0.00
7	10	93	30	113	1959	-99	1954	56	30	66	1959	48	1969	0.013	30	0.39	1957	0.00
7	11	100	30	110	1971	90	1955	56	30	64	1953	47	1955	0.001	30	0.02	1967	0.00
7	12	99	30	109	1972	91	1962	55	30	66	1968	46	1965	0.000	30	0.00	1977	0.00
7	13	100	30	111	1972	88	1962	56	30	68	1967	43	1966	0.004	30	0.13	1954	0.00
7	14	100	30	110	1960	89	1968	56	30	67	1974	44	1952	0.000	30	0.00	1977	0.00
7	15	100	30	112	1960	91	1976	57	30	66	1965	41	1952	0.000	30	0.00	1977	0.00
7	16	100	30	116	1960	83	1976	57	30	67	1977	49	1966	0.000	30	0.00	1977	0.00
7	17	100	30	115	1960	90	1975	58	30	65	1961	45	1958	0.003	30	0.09	1965	0.00
7	18	99	30	112	1960	90	1975	57	30	68	1956	45	1958	0.007	30	0.21	1951	0.00
7	19	100	30	113	1960	94	1972	57	30	72	1960	45	1962	0.000	30	0.00	1977	0.00
7	20	100	30	114	1960	89	1972	57	30	68	1960	49	1965	0.000	30	0.00	1977	0.00
7	21	99	30	110	1967	89	1961	57	30	72	1960	48	1973	0.001	30	0.02	1960	0.00
7	22	100	30	109	1966	90	1948	57	30	69	1971	44	1957	0.001	30	0.04	1976	0.00
7	23	101	30	107	1963	93	1958	57	30	65	1956	45	1957	0.006	30	0.17	1974	0.00
7	24	100	30	110	1959	85	1954	58	30	66	1959	47	1958	0.021	30	0.48	1952	0.00
7	25	100	30	111	1973	89	1949	58	30	67	1959	46	1949	0.000	30	0.00	1977	0.00
7	26	100	30	110	1977	88	1976	59	30	68	1964	48	1955	0.001	30	0.02	1976	0.00
7	27	100	30	107	1977	91	1949	60	30	71	1960	49	1965	0.003	30	0.06	1960	0.00
7	28	101	30	113	1972	88	1948	59	30	67	1968	48	1948	0.014	30	0.22	1951	0.00
7	29	100	30	110	1972	91	1961	60	30	70	1972	45	1948	0.008	30	0.14	1958	0.00
7	30	99	30	112	1972	83	1961	60	30	72	1972	47	1948	0.013	30	0.38	1965	0.00
7	31	101	30	113	1972	86	1950	60	30	70	1972	50	1970	0.000	30	0.00	1977	0.00
8	1	101	30	110	1972	90	1953	59	30	68	1972	48	1956	0.000	30	0.00	1977	0.00
8	2	101	30	108	1971	86	1956	59	30	72	1971	50	1976	0.000	30	0.00	1977	0.00
8	3	100	30	112	1969	86	1976	58	30	68	1955	50	1962	0.000	30	0.00	1977	0.00
8	4	100	30	111	1969	86	1955	56	30	75	1961	43	1962	0.000	30	0.00	1977	0.00
8	5	101	29	112	1969	89	1954	56	29	67	1961	46	1953	0.000	29	0.00	1977	0.00
8	6	101	29	110	1970	90	1957	57	29	68	1972	41	1950	0.004	29	0.11	1968	0.00
8	7	100	29	111	1975	85	1963	57	29	66	1972	45	1950	0.006	29	0.14	1963	0.00
8	8	101	29	111	1971	89	1949	57	29	71	1959	41	1948	0.000	29	0.00	1977	0.00
8	9	100	29	112	1965	81	1949	57	29	66	1971	42	1948	0.000	29	0.00	1977	0.00
8	10	100	29	107	1967	83	1949	57	29	67	1965	44	1948	0.003	29	0.04	1965	0.00
8	11	100	29	109	1967	84	1949	57	29	69	1965	44	1950	0.017	29	0.44	1965	0.00
8	12	100	29	113	1962	86	1954	57	29	69	1965	42	1950	0.011	29	0.19	1953	0.00
8	13	100	28	113	1962	88	1954	57	29	69	1958	44	1975	0.001	29	0.02	1965	0.00

8	14	100	29	112	1967	87	1976	57	30	68	1965	42	1954	0.002	30	0.07	1958	0.00
8	15	99	29	109	1962	79	1976	57	30	72	1967	44	1954	0.006	30	0.18	1977	0.00
8	16	99	29	109	1962	83	1977	57	30	69	1977	44	1975	0.016	30	0.26	1965	0.00
8	17	99	29	112	1950	73	1977	57	30	69	1977	44	1954	0.044	30	1.33	1977	0.00
8	18	100	28	112	1950	85	1976	57	29	67	1970	45	1956	0.016	29	0.26	1977	0.00
8	19	98	28	114	1950	78	1959	58	29	70	1961	44	1954	0.002	29	0.07	1961	0.00
8	20	99	28	107	1969	85	1959	56	29	67	1973	42	1954	0.010	29	0.28	1961	0.00
8	21	99	28	109	1969	90	1975	55	29	68	1961	44	1954	0.013	29	0.39	1961	0.00
8	22	99	28	110	1969	85	1960	55	29	72	1961	44	1954	0.001	29	0.03	1961	0.00
8	23	99	28	111	1964	91	1977	55	29	67	1961	47	1954	0.001	29	0.04	1959	0.00
8	24	99	29	111	1962	90	1960	56	29	68	1967	45	1963	0.000	29	0.00	1977	0.00
8	25	99	29	109	1962	85	1954	56	29	69	1970	45	1954	0.000	29	0.00	1977	0.00
8	26	98	29	110	1962	83	1973	56	29	66	1959	47	1975	0.005	29	0.14	1970	0.00
8	27	98	29	109	1962	82	1956	56	29	68	1951	37	1954	0.000	29	0.00	1977	0.00
8	28	98	29	112	1967	78	1956	55	29	67	1968	44	1953	0.007	29	0.19	1951	0.00
8	29	99	29	114	1967	74	1951	54	29	65	1967	44	1960	0.001	29	0.04	1951	0.00
8	30	98	29	112	1955	81	1953	55	29	68	1967	47	1975	0.000	29	0.00	1977	0.00
8	31	98	29	110	1950	82	1964	55	29	74	1967	46	1971	0.000	29	0.01	1964	0.00
9	1	99	29	109	1969	85	1964	54	29	67	1967	46	1953	0.000	29	0.00	1977	0.00
9	2	98	29	114	1950	88	1961	54	29	70	1967	45	1964	0.013	29	0.26	1967	0.00
9	3	98	29	112	1955	80	1967	55	29	73	1950	45	1970	0.007	29	0.14	1972	0.00
9	4	99	29	110	1955	79	1963	55	29	66	1972	43	1970	0.024	29	0.37	1963	0.00
9	5	99	29	111	1955	86	1973	55	29	65	1974	41	1970	0.000	29	0.00	1977	0.00
9	6	99	29	115	1955	80	1965	56	29	66	1972	41	1970	0.029	29	0.66	1958	0.00
9	7	99	29	111	1955	74	1965	57	29	67	1975	40	1964	0.021	29	0.45	1958	0.00
9	8	98	29	109	1971	81	1962	56	29	66	1971	42	1964	0.000	29	0.00	1977	0.00
9	9	99	29	108	1969	84	1950	56	29	67	1976	43	1961	0.000	29	0.00	1977	0.00
9	10	97	29	110	1953	76	1972	56	29	69	1960	40	1952	0.061	29	1.74	1976	0.00
9	11	95	29	112	1971	74	1976	55	29	71	1959	41	1952	0.052	29	1.52	1976	0.00
9	12	95	29	115	1971	77	1976	54	29	71	1959	37	1952	0.000	29	0.00	1977	0.00
9	13	95	29	115	1971	83	1970	53	29	69	1976	36	1954	0.009	29	0.25	1959	0.00
9	14	94	29	109	1971	83	1976	52	29	66	1971	39	1954	0.000	29	0.00	1977	0.00
9	15	93	29	110	1951	80	1976	51	29	62	1976	37	1954	0.001	29	0.03	1976	0.00
9	16	92	29	107	1951	75	1959	53	29	65	1975	37	1954	0.000	29	0.00	1977	0.00
9	17	91	29	108	1951	75	1965	53	29	63	1975	39	1954	0.046	29	1.18	1963	0.00
9	18	90	29	108	1962	70	1963	53	29	62	1975	41	1973	0.040	29	0.98	1963	0.00
9	19	90	29	106	1962	74	1972	52	29	63	1952	42	1964	0.042	29	0.71	1952	0.00
9	20	90	29	102	1974	71	1976	52	29	62	1952	39	1954	0.018	29	0.51	1952	0.00
9	21	92	29	107	1975	69	1961	52	29	62	1976	42	1953	0.000	29	0.00	1977	0.00
9	22	93	29	109	1949	67	1961	52	29	62	1961	41	1953	0.003	29	0.08	1962	0.00
9	23	94	28	108	1966	77	1958	51	28	62	1966	38	1953	0.001	28	0.04	1958	0.00
9	24	94	28	104	1963	71	1976	53	28	65	1964	43	1973	0.015	28	0.34	1976	0.00
9	25	92	28	108	1963	67	1976	52	28	61	1976	42	1958	0.013	28	0.21	1976	0.00
9	26	92	28	106	1963	69	1976	51	28	62	1963	41	1953	0.000	28	0.00	1977	0.00
9	27	92	29	108	1963	76	1953	52	29	62	1977	41	1953	0.000	29	0.00	1977	0.00
9	28	90	29	107	1963	72	1959	51	29	60	1976	40	1953	0.042	29	1.04	1967	0.00
9	29	90	29	106	1963	78	1971	50	29	62	1967	39	1955	0.013	29	0.39	1967	0.00
9	30	91	29	104	1972	73	1959	50	29	62	1976	36	1954	0.000	29	0.00	1977	0.00
10	1	91	29	103	1962	75	1959	49	29	60	1968	33	1954	0.012	29	0.35	1959	0.00
10	2	89	29	105	1964	74	1976	49	29	60	1968	37	1950	0.001	29	0.03	1976	0.00
10	3	89	29	104	1964	65	1954	49	29	59	1963	40	1949	0.008	29	0.12	1970	0.00
10	4	88	29	107	1964	73	1956	50	29	62	1963	39	1954	0.005	29	0.13	1956	0.00
10	5	89	29	106	1964	75	1956	49	29	64	1963	38	1969	0.001	29	0.04	1962	0.00
10	6	88	29	105	1964	69	1973	50	29	63	1972	38	1969	0.000	29	0.00	1977	0.00
10	7	87	29	102	1964	69	1961	50	29	61	1972	38	1954	0.000	29	0.00	1977	0.00
10	8	88	29	100	1971	63	1949	48	29	60	1977	40	1970	0.001	29	0.04	1973	0.00
10	9	87	29	105	1971	65	1960	46	29	57	1972	35	1961	0.008	29	0.11	1972	0.00
10	10	87	29	104	1971	68	1960	46	29	56	1967	35	1949	0.041	29	0.48	1966	0.00
10	11	87	29	102	1971	65	1957	45	29	58	1966	34	1952	0.027	29	0.78	1957	0.00
10	12	89	29	107	1950	65	1957	45	29	54	1972	35	1969	0.032	29	0.90	1957	0.00
10	13	88	29	104	1950	64	1957	46	29	56	1958	36	1969	0.003	29	0.09	1957	0.00
10	14	87	29	104	1961	71	1968	46	29	56	1958	35	1953	0.001	29	0.02	1972	0.00
10	15	86	29	104	1961	69	1957	47	29	63	1961	34	1966	0.003	29	0.07	1964	0.00

10	16	86	29	102	1958	59	1971	45	29	57	1958	33	1966	0.016	29	0.26	1971	0.00
10	17	86	29	103	1959	61	1971	45	29	57	1964	36	1966	0.014	29	0.22	1971	0.00
10	18	83	29	99	1967	62	1949	45	29	57	1957	35	1963	0.023	29	0.45	1963	0.00
10	19	83	29	98	1961	60	1949	44	29	56	1977	35	1969	0.004	29	0.07	1949	0.00
10	20	82	29	97	1964	59	1972	44	29	57	1976	32	1949	0.017	29	0.37	1972	0.00
10	21	82	29	96	1965	60	1957	45	29	67	1965	29	1949	0.020	29	0.58	1957	0.00
10	22	82	29	106	1965	55	1953	45	29	58	1976	36	1949	0.024	29	0.39	1976	0.00
10	23	81	29	103	1959	65	1953	44	29	57	1960	29	1952	0.050	29	1.39	1976	0.00
10	24	82	29	100	1968	67	1976	45	29	56	1976	31	1952	0.009	29	0.24	1971	0.00
10	25	81	29	98	1968	64	1971	42	29	53	1958	30	1954	0.022	29	0.59	1951	0.00
10	26	80	29	97	1965	63	1974	42	29	58	1959	30	1954	0.001	29	0.03	1974	0.00
10	27	81	29	99	1968	60	1971	44	29	59	1959	30	1954	0.008	29	0.13	1972	0.00
10	28	81	29	97	1973	60	1971	43	29	59	1959	29	1954	0.009	29	0.26	1974	0.00
10	29	82	29	97	1965	58	1971	41	29	53	1964	27	1971	0.013	29	0.19	1959	0.00
10	30	79	29	96	1962	65	1959	42	29	68	1967	24	1971	0.019	29	0.22	1957	0.00
10	31	79	29	96	1966	63	1974	41	29	55	1957	28	1971	0.021	29	0.62	1957	0.00
11	1	78	29	96	1967	61	1961	42	29	56	1957	30	1971	0.012	29	0.36	1957	0.00
11	2	79	29	94	1966	60	1959	42	29	54	1957	29	1956	0.044	29	1.04	1959	0.00
11	3	81	29	93	1975	58	1957	42	29	68	1950	33	1952	0.021	29	0.57	1957	0.00
11	4	80	29	94	1975	60	1957	40	29	51	1963	27	1956	0.003	29	0.06	1957	0.00
11	5	78	29	91	1949	54	1957	42	29	51	1968	31	1956	0.003	29	0.04	1960	0.00
11	6	79	29	92	1962	61	1957	41	29	59	1961	32	1957	0.050	29	0.96	1960	0.00
11	7	78	29	92	1962	60	1966	41	29	52	1961	29	1953	0.055	29	0.72	1969	0.00
11	8	77	29	92	1956	58	1966	40	29	50	1949	30	1954	0.026	29	0.53	1952	0.00
11	9	79	29	92	1956	63	1964	39	29	50	1949	32	1972	0.005	29	0.14	1964	0.00
11	10	77	29	92	1968	56	1949	41	29	53	1969	30	1952	0.052	29	1.22	1949	0.00
11	11	76	29	99	1963	56	1958	40	29	52	1969	27	1950	0.086	29	1.56	1954	0.00
11	12	74	29	92	1974	57	1960	41	29	53	1955	25	1950	0.020	29	0.37	1976	0.00
11	13	72	29	92	1967	59	1964	41	29	52	1968	33	1953	0.007	29	0.11	1960	0.00
11	14	70	29	89	1967	56	1972	40	29	51	1962	24	1964	0.094	29	0.59	1953	0.00
11	15	69	29	89	1949	52	1952	40	29	54	1969	24	1956	0.095	29	0.90	1965	0.00
11	16	69	29	89	1977	53	1958	38	29	55	1965	24	1956	0.091	29	1.07	1972	0.00
11	17	70	29	89	1949	45	1964	38	29	55	1965	19	1958	0.067	29	0.96	1964	0.00
11	18	70	29	88	1949	56	1964	37	29	58	1965	21	1958	0.062	29	1.10	1973	0.00
11	19	71	29	83	1966	60	1973	37	29	55	1967	21	1958	0.073	29	1.56	1967	0.00
11	20	71	29	85	1954	52	1953	37	29	55	1967	26	1975	0.059	29	1.00	1963	0.00
11	21	71	29	88	1962	57	1955	38	29	52	1965	25	1953	0.026	29	0.42	1967	0.00
11	22	71	29	87	1950	55	1951	37	29	53	1965	26	1953	0.067	29	1.63	1965	0.00
11	23	74	29	89	1968	49	1952	35	29	54	1965	29	1975	0.108	29	2.10	1965	0.00
11	24	75	29	90	1949	54	1951	36	29	52	1965	27	1952	0.010	29	0.19	1965	0.00
11	25	74	29	92	1977	56	1965	36	29	49	1958	27	1951	0.019	29	0.24	1965	0.00
11	26	73	29	93	1977	55	1964	37	29	50	1958	27	1966	0.026	29	0.51	1970	0.00
11	27	72	28	85	1977	57	1973	36	28	47	1964	25	1952	0.020	28	0.28	1975	0.00
11	28	72	28	86	1950	54	1975	35	28	51	1966	21	1976	0.031	28	0.71	1975	0.00
11	29	72	28	87	1964	53	1975	36	28	49	1971	24	1976	0.059	28	1.40	1970	0.00
11	30	70	28	87	1964	55	1961	36	28	48	1971	25	1976	0.020	28	0.28	1967	0.00
12	1	70	28	85	1949	53	1955	35	28	48	1955	28	1976	0.007	28	0.09	1973	0.00
12	2	70	28	88	1958	55	1970	36	28	49	1964	26	1953	0.069	28	1.26	1961	0.00
12	3	70	28	90	1958	56	1955	36	28	53	1966	24	1953	0.083	28	2.14	1966	0.00
12	4	69	28	86	1962	49	1955	36	28	51	1950	27	1952	0.103	28	1.12	1974	0.00
12	5	68	28	86	1977	53	1972	35	28	53	1966	24	1953	0.089	27	1.56	1966	0.00
12	6	69	28	84	1977	50	1951	34	28	57	1966	20	1960	0.026	28	0.53	1966	0.00
12	7	68	29	85	1962	51	1971	34	29	50	1966	19	1960	0.014	29	0.19	1966	0.00
12	8	67	29	86	1975	49	1972	33	29	50	1974	19	1951	0.025	29	0.26	1959	0.00
12	9	67	28	87	1962	50	1972	35	28	52	1965	20	1960	0.041	29	0.98	1965	0.00
12	10	67	28	85	1958	45	1972	35	28	51	1959	22	1956	0.066	29	0.78	1965	0.00
12	11	68	28	84	1958	49	1972	34	28	49	1965	24	1953	0.000	29	0.00	1977	0.00
12	12	68	28	84	1958	54	1972	32	28	47	1951	18	1949	0.035	29	0.76	1951	0.00
12	13	69	29	83	1958	49	1975	33	29	43	1950	22	1963	0.016	29	0.22	1967	0.10
12	14	68	29	81	1977	47	1967	33	29	43	1970	22	1964	0.010	29	0.16	1965	0.00
12	15	69	29	82	1969	47	1967	33	29	49	1957	25	1972	0.034	29	0.97	1957	0.00
12	16	68	29	82	1958	46	1967	35	29	52	1957	21	1963	0.020	29	0.21	1967	0.00
12	17	67	29	84	1958	53	1970	35	29	48	1957	24	1975	0.052	29	0.63	1952	0.00

12	18	67	29	82	1958	49	1967	34	29	50	1962	25	1968	0.046	29	0.76	1967	0.00
12	19	66	29	80	1960	45	1967	34	29	47	1962	23	1955	0.064	29	0.91	1970	0.00
12	20	67	29	82	1950	44	1968	34	29	48	1969	27	1971	0.062	29	1.01	1952	0.07
12	21	66	28	79	1972	49	1968	32	28	50	1959	20	1968	0.052	29	0.94	1970	0.00
12	22	65	28	80	1961	52	1965	34	28	48	1969	22	1968	0.042	29	0.74	1971	0.00
12	23	66	28	80	1961	55	1974	34	28	50	1955	23	1956	0.023	29	0.39	1971	0.00
12	24	65	28	84	1961	50	1970	34	28	52	1971	17	1953	0.060	29	0.85	1959	0.00
12	25	65	28	78	1960	51	1968	34	28	53	1971	17	1953	0.037	29	0.95	1971	0.00
12	26	66	29	79	1963	54	1971	33	29	53	1977	19	1953	0.055	29	0.77	1977	0.00
12	27	65	29	80	1963	46	1971	32	29	53	1977	18	1962	0.039	29	0.48	1971	0.00
12	28	63	29	82	1963	46	1971	33	29	55	1977	17	1954	0.077	29	0.83	1977	0.00
12	29	64	29	78	1956	51	1971	33	29	52	1977	20	1954	0.066	29	0.97	1951	0.00
12	30	64	29	76	1961	54	1951	32	29	52	1977	20	1969	0.109	29	2.16	1951	0.00
12	31	64	29	82	1963	50	1951	32	29	46	1977	19	1953	0.031	29	0.36	1976	0.00

Western Regional Climate Center, wrcc@dri.edu

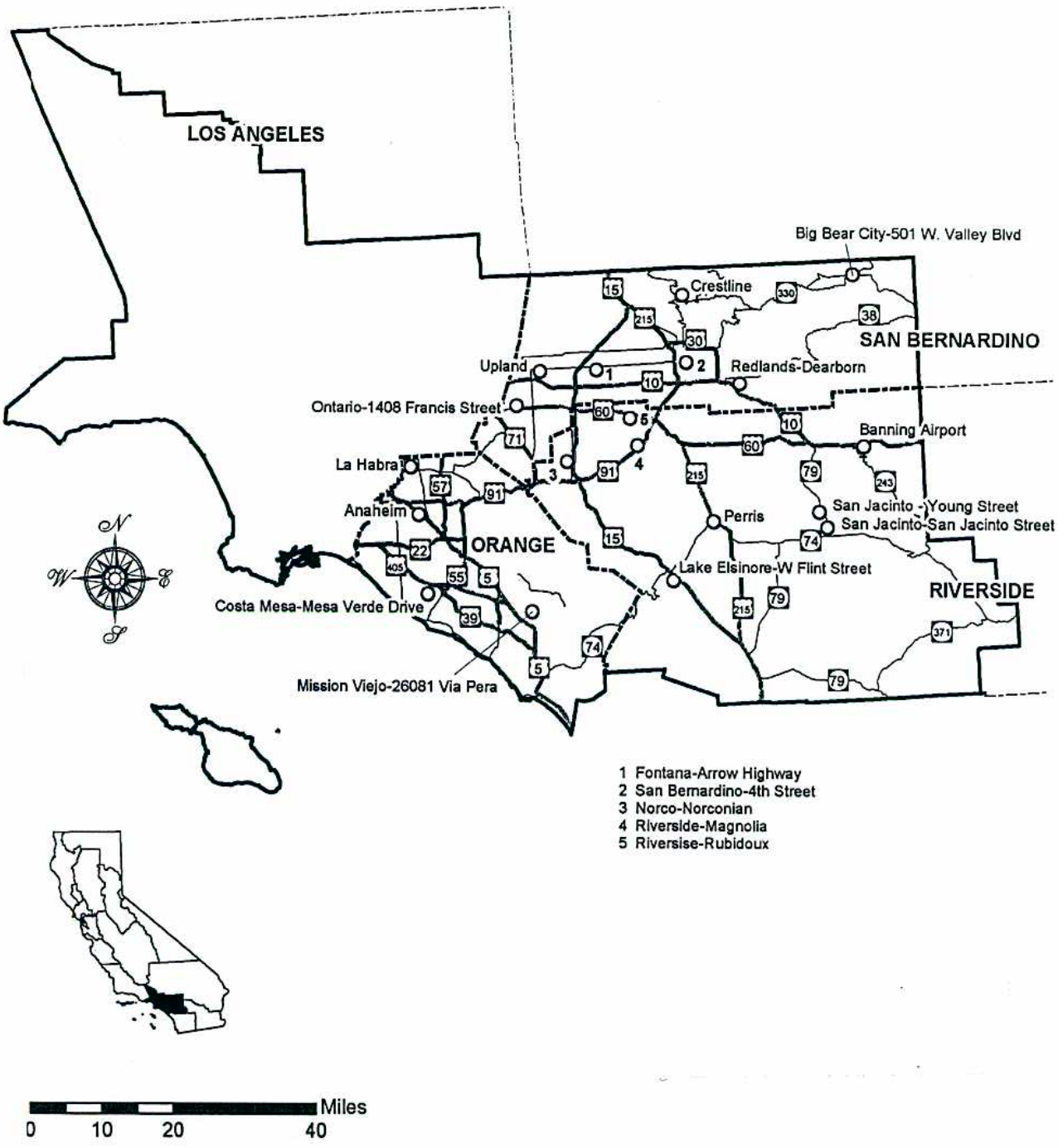


FIGURE 8.1B-1
SLAMS/NAMS Locations

CH2M Hill

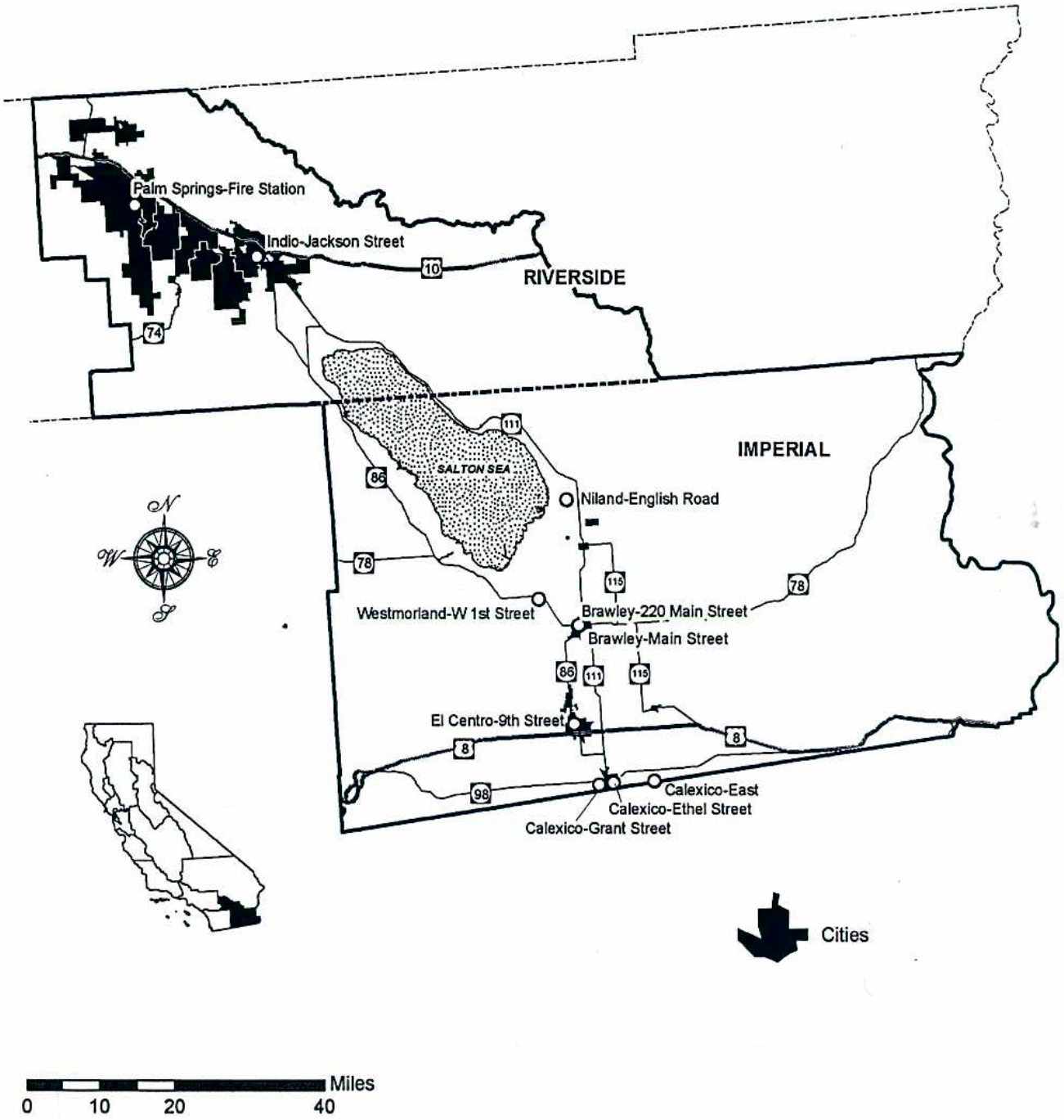


FIGURE 8.1B-2
SLAMS/NAMS Locations

CH2M Hill

Table 8.1B-10

Modeling Inputs/Results for SVEP Construction Impacts (Combustion Sources as 67 Point Sources)

Short Term Impacts (24 hrs and less)					Long Term Impacts (annual)				
	NOx	CO	SOx	PM10		NOx	CO	SOx	PM10
Combustion (lbs/day)	80.24	48.74	10.97	5.53	Combustion (tons/yr)	3.37	1.95	0.48	0.26
					Combustion (days/yr)	312	312	312	312
Combustion (hrs/day)	12	12	12	12	Combustion (hrs/day)	12	12	12	12
Combustion (lbs/hr)	6.69	4.06	0.91	0.46	Combustion (lbs/hr)	1.80	1.04	0.26	0.14
Combustion (g/sec)	8.43E-01	5.12E-01	1.15E-01	5.81E-02	Combustion (g/sec)	2.27E-01	1.31E-01	3.23E-02	1.75E-02
Point Sources (g/s/stack)	1.257E-02	7.638E-03	1.719E-03	8.666E-04	67	3.385E-03	1.959E-03	4.822E-04	2.612E-04
Construction Dust (lbs/day)				9.2	Construction Dust (tons/yr)				0.36
					Construction Dust (days/yr)				312
Construction Dust (hrs/day)				12	Construction Dust (hrs/day)				12
Construction Dust (lbs/hr)				0.76	Construction Dust (lbs/hr)				0.19
Construction Dust (g/sec)				9.63E-02	Construction Dust (g/sec)				2.41E-02
ISCST3 Inputs	**66350 m2**		16.40	Acres					
Combustion (g/s/m2)	1.270E-05	7.713E-06	1.736E-06	8.751E-07	Combustion (g/s/m2)	3.419E-06	1.978E-06	4.869E-07	2.638E-07
Construction Dust (g/s/m2)				1.451E-06	Construction Dust (g/s/m2)				3.632E-07
ISCST3 Results (ug/m3)									
Combustion Only					Combustion Only				
1-hour Max	72.605	44.102	9.926	5.00381					
3-hour Max			7.361	3.71087					
8-hour Max		24.490		2.77861					
24-hour Max			2.518	1.26932	Annual	1.676		0.239	0.12930
All Particulate Sources					All Particulate Sources				
24-hour Max				34.42083	Annual				7.20784
1-hour NO2 w/ OLM	72.605	for Avg 8a-4p O3(ppm)		0.165	Annual NO2 w/ ARM	1.257	based on ARM Ratio of:		75%
Background					Background				
1-hour Max	191.3	8153.1	53.2						
3-hour Max			53.2						
8-hour Max		4542.4							
24-hour Max			39.9	164	Annual	45.9		8.0	58.5
Total + Background					Total + Background				
1-hour Max	263.9	8197	63.1						
3-hour Max			60.6						
8-hour Max		4567							
24-hour Max			42.4	198	Annual	47.2		8.2	65.7

Table 8.1B-11

Standards Comparison for Sun Valley Energy Project Construction Impacts									
Pollutant	Averaging Time	Impacts (ug/m3) Construction Only	Impacts (ug/m3) Construction+ Background	Standards (ug/m3) National	Standards (ug/m3) California	Construction Only % of Standards National	Construction Only % of Standards California	Construction+Background % of Standards National	Construction+Background % of Standards California
NOx	1-Hr	72.6	263.9	-	470	-	15%	-	56%
	Annual	1.3	47.2	100	-	1%	-	47%	-
CO	1-Hr	44	8197	40000	23000	0%	0%	20%	36%
	8-Hr	24	4567	10000	10000	0%	0%	46%	46%
SOx	1-Hr	9.9	63.1	-	655	-	2%	-	10%
	3-Hr	7.4	60.6	1300	-	1%	-	5%	-
	24-Hr	2.5	42.4	365	105	1%	2%	12%	40%
	Annual	0.2	8.2	80	-	0%	-	10%	-
PM10	24-Hr	34.4	198.4	150	50	23%	69%	132%	397%
	Annual	7.2	65.7	50	30	14%	24%	131%	219%